Career Advising & Professional Development
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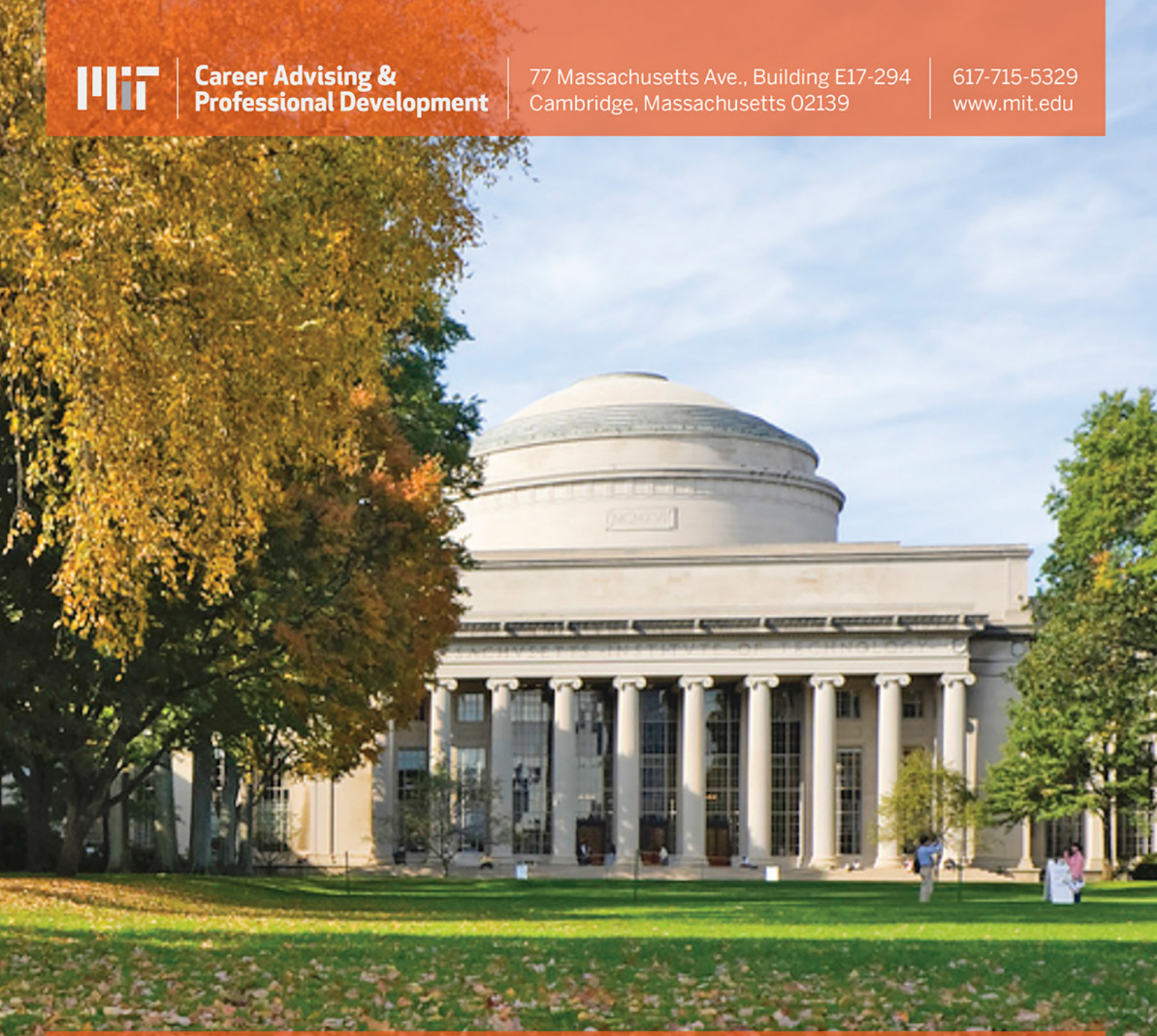

Career Development Handbook

Contents

MIT Career Advising & Professional Development

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Introduction to Career Advising & Professional Development

Mission Statement

We empower students, postdocs, and alumni to explore their life and career goals by helping them to develop core competencies and build professional networks. Our goal is to engage students and alumni in self-discovery to craft lives that are intellectually challenging, personally enriching, and of service to the world.

Services and Resources

CAPD Website

Services, events, career info and more

capd.mit.edu

Career Services Quick Queries

15 minute meetings for quick questions during high volume times

https://mit.joinhandshake.com/login

Career Appointments

Book online, by phone, or in person

https://mit.joinhandshake.com/login

CAPD Events

Topics covered include Resumes, Interviewing, Negotiating, etc.

https://capd.mit.edu/events

Job Postings

Find job and internship openings

https://mit.joinhandshake.com/login

On Campus Recruiting

Interview with employers

https://capd.mit.edu/jobs-and-internships

Prehealth Advising

Med school application process and other health-related career advising

https://capd.mit.edu/grad-and-med-school

Distinguished Fellowships

Advising and applications process for distinguished fellowships (Rhodes, Marshall, Fulbright, etc.) opportunities

MIT Student Professional Development Competencies

Career Advancement

Identify goals and explore career options while acting in accordance with professional expectations.

- Identify and articulate skills, strengths, knowledge, values, interests, and experiences to develop career path
- Develop and expand one's disciplinary expertise
- Understand organizational norms and expectations
- Self-advocate for career advancement opportunities
- Build supportive relationships through networking

Communication

Receive and translate gained knowledge to articulate information clearly.

- Listen actively to understand and respond
- Express ideas coherently through diverse media
- Present information effectively to a wide variety of audiences

Interpersonal Skills

Build collaborative relationships and work effectively with people from diverse backgrounds.

- Interact, work with, and learn from others with diverse backgrounds and identities
- Make positive contributions to the work of a team in various roles
- Understand and effectively navigate cross-cultural norms
- Negotiate, manage conflict, and problem solve

Leadership and Mentoring

Lead others in the pursuit of a common vision, and develop advising relationships.

- Develop strategic plans to establish and achieve goals
- Identify and understand group dynamics of a diverse talent pool to allow for innovative solutions
- Develop, motivate, and gain buy-in from others
- Create relationships with others who have more experience or knowledge
- Develop relationships with others to share your knowledge and experience

Personal Development

Develop self-awareness and behaviors for personal growth and fulfillment.

- Understand the roles that effort, learning, and failure play in ultimate achievement of goals
- Create an appropriate balance between work and life
- Recognize emotions of self and others and use that information to guide thinking and behavior
- Demonstrate personal accountability and leverage constructive criticism
- Discover and articulate personal values

Social Responsibility

Work with integrity and understand the broader social implications of one's decisions and actions.

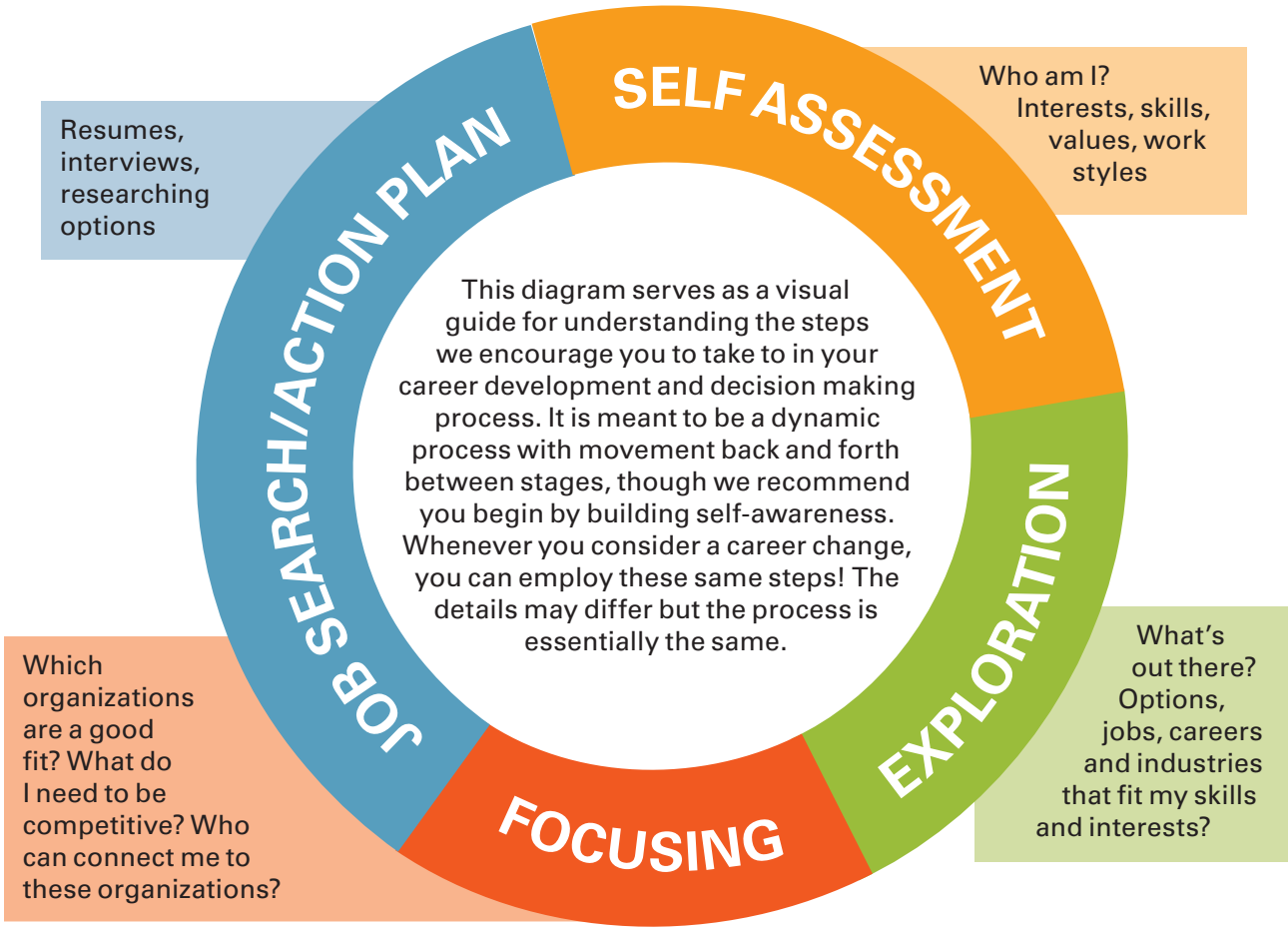
- Use ethical reasoning and act accordingly
- Recognize social and environmental impacts of actions
- Consider the economic and governmental context of actions

Teaching

Implement methodologies to educate, evaluate, and provide actionable feedback.

- Use evidence-based teaching practices
- Evaluate and assess student learning and performance

Career Development Process



Are you prepared to make informed career decisions? Consider the following:

Self-Knowledge

- I know what motivates me to excel
- I can identify my strongest abilities and skills
- I have some ideas of what I want to do during the next two to three years
- I can list my major accomplishments in action terms

Knowledge of Employer Needs

- I know what skills I can offer
- I can explain what I do well
- I can specify why an employer should hire me

Internship or Job Search Skills

- I can conduct research on occupations, employers, and organizations
- I know where jobs and internships of interest are posted
- I know how to network to develop connections in occupations and companies that interest me
- I can write effective resumes, cover letters, and thank-you notes
- I know how to interview effectively

Adapted from Job Search Tips where it was reprinted with permission from Change Your Job, Change Your Life *by Dr. Ronald L. Krannich, 1995, Impact Publications.*

Self-Assessment

Self-assessment, or knowing yourself, provides an essential foundation for career decision-making. Thoughtful self-assessment helps you to focus on opportunities compatible with your goals, and enables you to market yourself knowledgably and confidently. When choosing a career, it is important to consider your interests, skills, and values, but first you must know what they are!

Seven Clues to Help You Get Started

Learning your own unique pattern of interests, motivation, satisfaction, and meaning is an important first step in career development. Think about these questions and consider meeting with a counselor at CAPD to discuss your thoughts.

1. What classes fascinate and absorb you?
2. If you had three lifetimes, what dream jobs attract you, and why?
3. What do you naturally do well?
4. What local, societal, or world issues interest you?
5. What is the most gratifying thing you ever did? What experiences turned out to be the most dissatisfying to you?
6. If you knew you couldn't fail, what might you most like to do?
7. What is something you are doing when you lose track of time?

Accomplishments Inventory

Think about something you achieved or accomplished of which you feel particularly proud. These do not have to be academic accomplishments, but can come from any area of your life. What skills did you use to reach your accomplishment? Which skills did you enjoy using?

Describe the Accomplishment	Why Are You Proud of This Accomplishment?	List of Skills Used	Enjoyed Using Skill	Did Not Enjoy Using Skill
Accomplishment 1:				
Accomplishment 2:				
Accomplishment 3:				

Adapted with permission from The University of Notre Dame's Career Development Guide 2016-2017.

Self-Assessment – Skills Inventory

Assess your skill level for each item on the 3 checklists below. Put a check by skills you think you have; double check skills you feel are your strongest.

1. FUNCTIONAL OR TRANSFERABLE SKILLS RELATED TO WORKING WITH PEOPLE

____ Delegate
____ Motivate
____ Oral Communication
____ Written Communication
____ Develop Rapport
____ Handle Complaints
____ Counsel
____ Listen
____ Interview
____ Interpret
____ Teach/Instruct
____ Coordinate Events
____ Arrange for Meetings
____ Plan - Meetings or Workshops
____ Plan - Goal Setting/Projections
____ Facilitate Groups or Discussions
____ Collaborate
____ Consult/Advise
____ Nursing/Child Care
____ Social/Hosting
____ Negotiate/Arbitrate
____ Supervise/Manage
____ Persuade/Influence
____ Mobilize Resources
____ Train
____ Organize
____ Chair Meetings
____ Recruit
____ Sell
____ Public Relations
____ Public Speaking
____ Fund Raising
____ Financial Management
____ Telephone
____ Promote
____ Other

2. FUNCTIONAL OR TRANSFERABLE SKILLS RELATED TO WORKING WITH OBJECTS OR THINGS

____ Computer
____ Precision Work
____ Handle Objects
____ Machine or Manual
____ Creative Use of Materials/ Artistic
____ Inspect
____ Build/Construct
____ Repair/Maintain
____ Mechanical Ability
____ Operate Equipment
____ Craft Skills
____ Home Economics
____ Physical Coordination
____ Manual Dexterity
____ Horticultural
____ Use of Office Machines
____ Mechanical Drawing
____ Appraise/Estimate
____ Assemble
____ Distribute
____ Work in Laboratory
____ Make Layouts
____ Map
____ Measure
____ Keep Records
____ Use Instruments/Precision Work
____ Other

3. FUNCTIONAL OR TRANSFERABLE SKILLS RELATED TO DATA/IDEAS/INFORMATION

____ Investigate
____ Classify/Record Keep
____ Abstract
____ Copy/Duplicate
____ Store/Retrieve
____ Purchase
____ Account/Keep Books
____ Draft
____ Compute/Numerical
____ Accurate/Attention to Details
____ Proofread
____ Plan (Utilizing Information)
____ Write Composition
____ Gather Information
____ Research
____ Read/Study
____ Improve/Adapt
____ Edit
____ Organize/Synthesize Data
____ Develop Ideas
____ Conceptual Ability
____ Scientific Methodology
____ Statistical Analysis
____ Forecast
____ Analyze
____ Innovate
____ Financial Management/ Budget
____ Design
____ Visual/Imaging
____ Evaluate
____ Compute/Calculate
____ Observe
____ Program
____ Clerical
____ Diagnose
____ Other

FUNCTIONAL SKILLS ANALYSIS from 1, 2, & 3

My most outstanding skills related to:

Working with People	Objects/Things	Data/Ideas/Information
1. _____	1. _____	1. _____
2. _____	2. _____	2. _____
3. _____	3. _____	3. _____
4. _____	4. _____	4. _____
5. _____	5. _____	5. _____

Self-Assessment – Work Values Inventory

This checklist presents common "satisfaction factors" that people receive from their jobs. Begin by reading the entire list, then rate each item using the scale that follows. Circle your top 5 work values.

1 = Very Important
2 = Important
3 = Not Very Important
4 = Not Important at All

_____ **Help Society:** Contribute to the betterment of the world I live in.
_____ **Help Others:** Help others directly, either individually or in a group.
_____ **Public Contact:** Have lots of daily contact with people.
_____ **Work with Others:** Have close working relationship with a group.
_____ **Affiliation:** Be recognized with an organization where status is important to me.
_____ **Friendship:** Develop close personal relationships with coworkers.
_____ **Competition:** Pit my abilities against others and where there are clear outcomes.
_____ **Make Decisions:** Have the power to set policy and determine a course of action.
_____ **Work Under Pressure:** Work where deadlines and high quality are demanded.
_____ **Power and Authority:** Control other people's work activities.
_____ **Influence People:** Be in a position to change people's attitudes and opinions.
_____ **Work Alone:** Do things by myself, without much contact with others.
_____ **Knowledge:** Seek knowledge, truth, and understanding.
_____ **Intellectual Status:** Be regarded by others as an expert or a person of intellect.
_____ **Artistic Creativity:** Do creative work in any of several art forms.
_____ **Creativity:** Create new ideas, programs, or anything else not previously developed.
_____ **Aesthetics:** Have a job that involves sensitivity to beauty.
_____ **Supervision:** Guide other people in their work.
_____ **Change and Variety:** Have changing job duties or settings.
_____ **Precision Work:** Do work that allows little tolerance for error.
_____ **Stability:** Have job duties that are largely predictable and not likely to change.
_____ **Security:** Be assured of keeping my job and a reasonable financial reward.
_____ **Fast Pace:** Work quickly and keep up with a fast pace.
_____ **Recognition:** Be recognized for the quality of my work visibly or publicly.
_____ **Excitement:** Work that offers change and stimulation.
_____ **Adventure:** Do work that requires me to take risks.
_____ **Profit, Gain:** A chance to accumulate money and goods.
_____ **Independence:** Work on my own, determine my own work with little supervision.
_____ **Moral Fulfillment:** Work that contributes to a set of important moral standards.
_____ **Location:** Find a place to live that matches my lifestyle and personality.
_____ **Community:** Live in a town where I can get involved with community affairs.
_____ **Physical Challenge:** Have a physically demanding job that is rewarding.

Reprinted with permission from The University of Notre Dame's Career Development Guide 2016-2017.

Success Checklist for Undergraduates

	Academics	Career Decision Making	Extracurriculars
First Year – Explore	**Explore MIT** ❑ Review the course catalog ❑ See an academic advisor ❑ Get to know your professors ❑ Attend the Choice of Major Fair. You are expected to pick a major in April but may remain undecided until Sophomore year ❑ Identify 3 career fields of interest ❑ Do informational interviews with alumni: (see page 13)	**Explore Career Issues** ❑ Meet with a career counselor to help identify your interests, skills, and values ❑ Explore CAPD offerings such as workshops, resume critiques, and mock interviews ❑ Develop a resume ❑ Research summer internships ❑ Consider a summer UROP ❑ Attend panels and info sessions	**Get Involved** ❑ Participate in dorm activities, clubs and organizations, or service projects ❑ Ask for advice from resident assistants, first year advisors, teaching assistants and counselors
Sophomore – Clarify	**Clarify Academics** ❑ Confirm your choice of major ❑ Meet regularly with your advisor ❑ Choose electives to make you more versatile. Consider a second major or minor if interested ❑ Explore opportunities for research ❑ Consider international opportunities. Meet with a Global Education (GEO) or MISTI advisor	**Refine Career Goals** ❑ Meet with a career counselor ❑ Update your resume and post it on CareerBridge ❑ Attend career fairs ❑ Attend CAPD workshops to build career skills and professional development competencies ❑ Explore opportunities for work experience: internships, externships, UROPs ❑ Network and cultivate mentors ❑ Do informational interviews	**Connect** ❑ Participate in student professional organizations ❑ Seek opportunities to build leadership skills ❑ Volunteer—the PKG Center can help you get started with this
Junior – More Experience	**Specialization** ❑ Choose electives to enhance learning and career goals ❑ Consider a UROP if you haven't already ❑ Consider your interest in grad or professional school ❑ Continue developing relationships with faculty, grad students, and professionals. Identify potential references ❑ Apply to distinguished fellowships and scholarships if appropriate	**Gain Experience** ❑ Meet with a career counselor to create a job or grad school search strategy ❑ Update your resume ❑ Find a summer internship or UROP ❑ Do informational interviews ❑ Network, network, network ❑ Create a LinkedIn profile ❑ Do a mock interview at CAPD ❑ Shop for interview attire	**Exercise New Skills** ❑ Consider joining professional associations ❑ Continue involvement in clubs, student organizations, and volunteer activities
Senior – Commit	**Decisions** ❑ Apply to graduate or professional school if that is your plan ❑ Develop or continue an independent research project with a professor ❑ Keep grades up	**First Career Choice** ❑ Visit CAPD to make a job search plan ❑ Attend workshops on how to network, write a resume, interview, etc. ❑ Update your LinkedIn profile ❑ Do a mock interview at CAPD ❑ Participate in on-campus recruiting ❑ Ask for 3 references ❑ Analyze job offers; use the graduate student surveys on the CAPD site	**Prepare to Graduate** ❑ Consider outside activities (family, lifestyle, values, etc.) ❑ Project your needs and create a budget ❑ Serve as a leader ❑ Enjoy your senior year and join the Alumni Association!

Choice of Major

- Choosing a major does not limit you to only one career choice.
- Choosing a career does not limit you to only one major.
- Graduate work does not have to be in the same area as an undergraduate degree.
- It is okay to change your mind.

Considerations	Course _____	Course _____	Course _____
Appeal of area of study • Will you enjoy studying this major?			
Level of challenge • Can you perform well in this field? • Is your motivation strong enough to enable you to succeed in this major? • Are you choosing this major because it is easy? Because it is hard?			
Department characteristics • How big is the department? • How do you relate to other students in this major? • Are the faculty accessible? Do you seek them out for informal discussions and other interactions? • Are there activities in the department that bring students together? Are there activities that bring students and faculty together?			
Courses within your major • Will this major help you acquire prerequisites needed for graduate studies you may be considering? • How many credits does this major require? Do you wish to focus largely on one department, or do you want flexibility to study in other departments as well?			
UROPs/internship programs • Are there opportunities for you to get experience in your major that will help prepare you for your potential career?			
Skills • What kinds of skills will you develop?			
Family, peers, outside influences • How are outside pressures from family, peers, and the job market influencing your decision?			
What else do you need to know to make a better decision?			

Resources

- UAAP: **http://web.mit.edu/uaap/**
- Undergraduate Departmental Administrators—great people to talk with about their departments: **http://web.mit.edu/acadinfo/deptcontacts/undergrad_administrators.html**
- Alumni Advisor's Hub—Get advice, insight, and prep from alumni who are willing to share their knowledge and make a difference: **https://alumniadvisors.mit.edu**

MIT Career Advising & Professional Development

Individual Advising

We offer 45-minute appointments available in person, and by phone, or WebEx for non-local students/alumni. We also offer weekly drop-ins for quick 15-minute questions. To book an appointment today, please log into CareerBridge: **https://mit.joinhandshake.com/login**

Workshops & School Visits

We offer a variety of programming throughout the academic year to help students explore their interest in healthcare and guide them through the application process. We also host visiting healthcare professional schools.

Physician Shadow Program

This program provides the opportunity to experience a day in the life of a physician and sparks the exploration of a path in medicine. Shadow opportunities are currently offered at MGH, Boston Children's Hospital, and Tufts Medical Center.

Mock Interviews

We help current applicants prepare for medical school and other health professional program interviews.

Essay Critiques

We provide advice on how to prepare the personal statement required of most health professional programs.

Committee Letter

MIT's Committee on Prehealth Advising (COPA) can provide a letter of support for candidates to medical and other health professional programs. To receive a COPA letter a student must request it by submitting a non-refundable $100 fee. Learn more here: **https://capd.mit.edu/grad-and-med-school/apply-medical-school**

For more information about our services, please email **prehealth@mit.edu** or visit our website: **https://capd.mit.edu/grad-and-med-school/prepare-medical-school**

Follow Prehealth Advising on Facebook: **@MITPrehealthAdvising** and Twitter: **@MITprehealth**

Prehealth Timeline and Considerations

Important things for prehealth students to consider while at MIT

MIT Premed Application Timeline

By now, you have explored the field, developed the competencies and experience for medical school, and know you want to apply. The timeline below will assist in keeping you organized throughout the application process.

Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	March	April	May
Schedule your **COPA Enrollment Appointment** through CareerBridge. *During COPA Enrollment appointments, we'll discuss areas of strength and weakness in your application, determine tangible next steps & potential gap year options if needed.*		Request your **Committee on Prehealth Advising Letter** (COPA)	**Prepare Individual Components of Your Application** : Personal Statement, Recommendations, Transcripts, Select Schools, (Re)Take MCAT, etc.				**Alumni** · Deadline to Submit Prehealth Credential Service Account	Begin Filling out Primary Application (AMCAS, AACOMAS, TMDSAS, etc.) **Undergrads** · Deadline to Submit Prehealth Credential Service Account

June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	March	April 30th
June 30th Submit Primary Application	Complete Secondary Applications		**Medical School Interviews**							**Confirm where you'll attend!**
				Medical Schools begin sending acceptances, rejections, waitlists – You may hold multiple acceptances until April						

This timeline is for medical school applicants. If you plan to apply for other health professional programs, please see an advisor for more information.

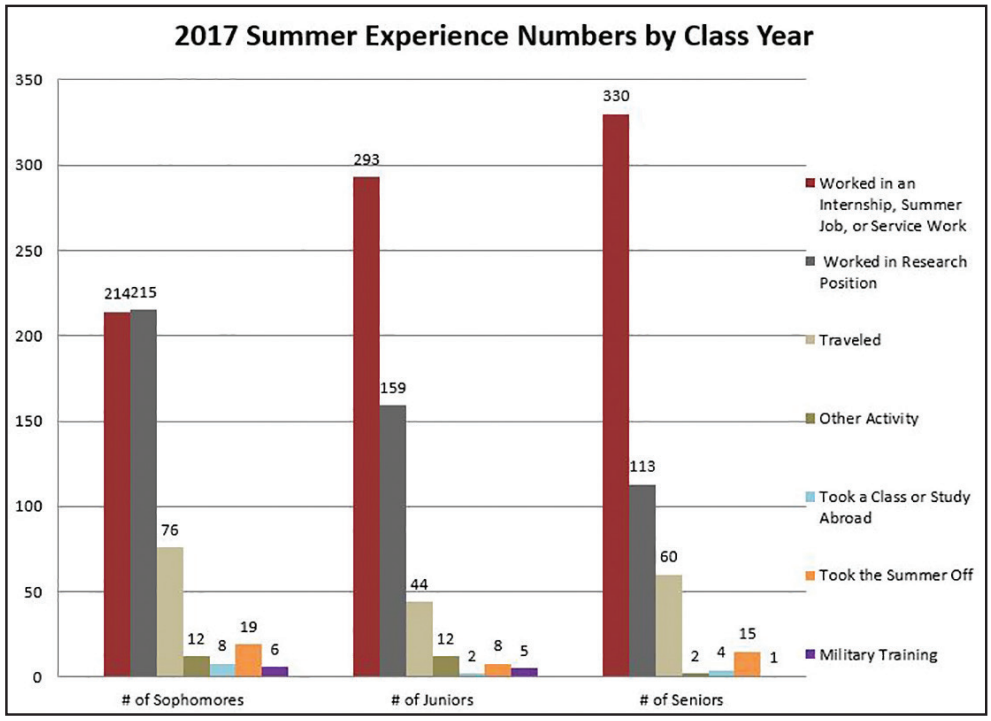
You Can Major in Anything	• There is no preference for certain majors • Choose what you are most interested in as GPA does matter
Take Prerequisite Courses	• Consult Prehealth Recommended Course List • Prepare for MCAT/DAT/GRE entrance exams
Gain Clinical Exposure & Research Experience	• Shadow physicians and other health professionals • Volunteer in a hospital or other clinical setting • Participate in research
Develop Competencies	• Review AAMC competencies • Join clubs and organizations • Study abroad and/or participate in MISTI
Get to Know Your Professors	• You will need to request letters of recommendation from faculty • Attend office hours • Take your favorite faculty member to dinner through MIT UA

Experience can come in many forms:

Did you know?
You can visit **capd.mit.edu** for a list of opportunities you can participate in to get experience.

Experiences such as the above give you an opportunity to:

- Apply academic concepts in practice
- Explore possible future occupations
- Network with others in the field
- Develop transferrable skills such as communication, critical thinking, teamwork, change management, information technology, leadership, interpersonal diversity, social responsibility, and technical knowledge.



MIT offers a variety of programs and some have submission deadlines in the fall semester. If you are seeking an internship overseas, you will need to start your search process at least six months to a year in advance, depending on the countries to which you will be applying.

Source: GECD 2017 Summer Experience Survey

Networking

What is it?

Networking is the process of building relationships and making connections to others who may provide you with advice, information, or further contacts. The members of your network will enhance your ability to make informed career decisions and may provide opportunities that you may not get otherwise. Your network can include individuals or groups.

How do I build a career network?

- **Career sites (e.g. LinkedIn):** Create or update a LinkedIn profile or other appropriate professional career site profile. Take advantage of LinkedIn Groups such as Industry or Alumni associations (see page 16 for more information on LinkedIn).
- **Connect:** Add your connections to others (consider relatives, friends, social contacts, former work colleagues, bosses, contacts met at conferences and seminars, etc.). Consider making new connections in areas where you are lacking information or mentors.
- **Informational Interviews:** Reach out to your connections and tell them what you are up to and what your interests are. Ask them appropriate questions (see next page regarding Informational Interviews).
- **Other social media:** Review your social media sites for appropriate content. Make sure private items are private, or remove them entirely (see page 15 for further information).
- **Resume:** Keep your resume up-to-date and ready to send (see page 21).
- **Elevator pitch:** Prepare and practice a 30-60 second "elevator pitch" that succinctly describes who you are and what you are seeking (see page 19).
- **Research:** Find out about companies of interest; try to learn the name of hiring managers based on a recommendation from your network. Attend company presentations.
- **Build:** Build relationships steadily over time.
- **Record:** Create a record of all contacts made for future reference.

Go out of your way and find an advisor. Talk to alums, faculty members, and other students to help you figure out "how to do MIT." There are lots of opportunities that are available to you, but you have to do some work in finding them. Second, make sure to look up every once in a while and meet people. Your MIT network is so incredibly valuable.

—Lynne Tye, Course 9, Class of 2010

Gain perspective from different professionals and take notes. Everyone has a different testimony regarding their job hunt; it is important that you gather a large enough census such that you have options on how to navigate.

—Joe Brown, Course 2a, Class of 2007

For more advice from Joe, Lynne, and other alumni, visit **https://capd.mit.edu/infinite-careers-alumni-profiles**
To connect with alumni, visit Advisor's Hub at **https://alumniadvisors.mit.edu**

Informational Interviews

Informational interviewing is a low-pressure way to gather career information from people who are already working in occupations, organizations, or geographic locations of interest to you. Both the content of the information, and the process of gathering it will help you to refine your career goals and possibly discover new ones.

1. Identify Professionals to Interview

Start by asking people you already know.

- Family, friends, neighbors, professors, or past coworkers may work in the career you want to explore.
- The MIT Alumni Directory, Advisor's Hub, LinkedIn, and professional associations are other places to find people who are working in your field of interest.

2. Connect with Contacts

You can request to set up meetings by email, in person, via social networking sites like LinkedIn, or on the phone.

- Introduce yourself and explain how you got their name.
- Tell them you are researching the _____field and seeking advice (Remember, the purpose of informational interviewing is not to ask for a job or internship).
- Request a 20-30 minute meeting at their worksite if possible. Meeting at a local coffee shop, or via phone or skype are good alternatives.
- Be clear, concise, and courteous in your communication. (See example email to request an informational interview on page 49).

3. Prepare for Your Meeting

Now it's time to prepare for your meeting just as you would for an actual job interview.

- Conduct preliminary research on the organization. Knowing some specifics about the occupation and the company will help you to create targeted questions, and show your enthusiasm and professionalism.
- Develop and bring a list of open-ended questions that will help you evaluate if the career is a fit for you.
- It's important to clarify your objectives before the meeting to determine what information you are seeking. Your goals will change along a continuum from general career research to specific job research advice.

4. Conduct the Interview

Informational Interviews are more casual than job interviews, but you should still make a positive professional impression. On the day of the interview:

- Arrive early, especially if you are meeting in a public place such as a coffee shop. This will ensure you are able to find a place to sit.
- You are leading the interview. Start by thanking the individual for his or her time.
- Monitor the time and end the interview within the specified time.
- Show gratitude after the interview by sending a thank-you email or note within 24 hours.

5. Evaluate the Information Gathered

Take a moment to reflect on the following:

- What did you like? What positive impressions do you now have about this area of work?
- Did you discover any new concerns about or advantages of the occupation?
- How does this information help you to clarify your own career objectives? Did you discover another occupation you might want to learn about?
- What are your next steps? With whom else do you plan to talk? (Beware of relying too heavily on the views or advice of only one or two people).

Ongoing

Keep a document with a record of the people with whom you have interviewed, the dates of the meeting, what was discussed, and names of additional contacts. The people you meet are potential members of your professional network.

Informational Interviews—Suggested Questions

Job Description

- What are your major job responsibilities? If possible, describe a typical work day or work week.
- What aspects of your job do you enjoy most/least?
- How is your time divided between working with people, data, and things?

Career Path

- How did you get into this field? Could you describe your career path?
- What are the typical entry-level jobs in this field? What are some possible career paths?
- How do most people enter this field?

Work Environment

- How would you describe your work environment?
- How much flexibility are you permitted in your job? How much autonomy do you have?
- How much work do you take home? How many hours do you work each week?
- Would a geographic move affect your career? If so, how and why?
- What are your biggest challenges or problems you have encountered?

Industry

- What are the challenges facing this industry today?
- Who do you consider to be the leaders in this industry? How do you view the current state of the industry?
- What changes do you see occurring in this field? Will the type and number of jobs change significantly over the next 10 years? What, if any, will be the effect of changing technology on the field?

Preparation

- What do you wish you had known before you entered this field? What is the best advice you were given when entering the field?
- What are the minimum qualifications a person needs to enter this field?
- Are there any professional groups in the field that you recommend I join or conferences that you recommend I attend?
- Where might I find job descriptions and other specifications for some of the positions in this field? Do you have any suggestions on my job search strategy?

Organization/Company

- What is the size and structure of your organization? What geographic locations have offices?
- How does the work of your group/division/office fit into the work of the overall organization? What is the average length of time employees stay with the organization?
- What type of formal on-the-job training is provided?

General

- Are there any questions I should have asked but did not?
- Do you mind if I stay in touch with you regarding my career search?
- Is there anyone else in the field with whom you would suggest I speak?

Social Media

Statistic Source: "Jobvite Annual Recruiter Nation Survey" 2018

Considerations

Control Your Image
Review your online presence…How do you appear on Facebook? YouTube? Your blog? Remove anything that could potentially damage your reputation. And for future posts, remember that anything you post might be accessed by others in the future.

Communicate in a Professional Manner
Each interaction with your network or potential employers is a demonstration and potential evaluation of your communication skills. Maintain professional language at all times. Respond promptly to emails. Be careful not to communicate too frequently with minutiae, as this can be perceived as needy.

Use Twitter
Employers post job opportunities on Twitter, so investigate whether your ideal employers have Twitter handles to follow. Also, consider searching for handles dedicated to internship postings such as @USA_Internship.

Be Active on LinkedIn
LinkedIn has become the preferred professional networking site for employers and employees. Create an account and keep it updated (see next page). Employers use LinkedIn frequently to vet candidates further so make it look professional.

LinkedIn—Professional Networking

Benefits

- Each month, 260 million users visit LinkedIn.
- LinkedIn:
  - provides an online professional presence
  - contains content from your resume, cover letter, and references for others to see
  - is a networking site that allows you to make new professional connections
  - contains access to job listings
  - contains Information for research on companies or people you are going to meet
  - has a student job portal: **http://www.linkedIn.com/studentjobs**

Building a Profile

Create a Profile Heading

Your headline is one of the most highly weighted elements in the LinkedIn search.

It is your first opportunity to make an impression, so make it count!

Get a Professional-looking Photo

Avoid distracting backgrounds.

Use a headshot with shoulders on up.

Education

Make your education at MIT stand out by having the Education section towards the top of your profile.

Include your major(s)/minor(s), study abroad, and GPA if it is strong.

Create a Professional Summary

Most users will see only the first 220 characters in the new LinkedIn version, so choose wisely.

You may talk about your qualifications, experience and goals. First person is okay.

Skills and Endorsements

Your top 3 skills will be highlighted, so put them in order of importance.

Join Groups

Join groups of professional interest; join discussion groups.

Connect: build your network with quality contacts.

Optimize your profile for search engines

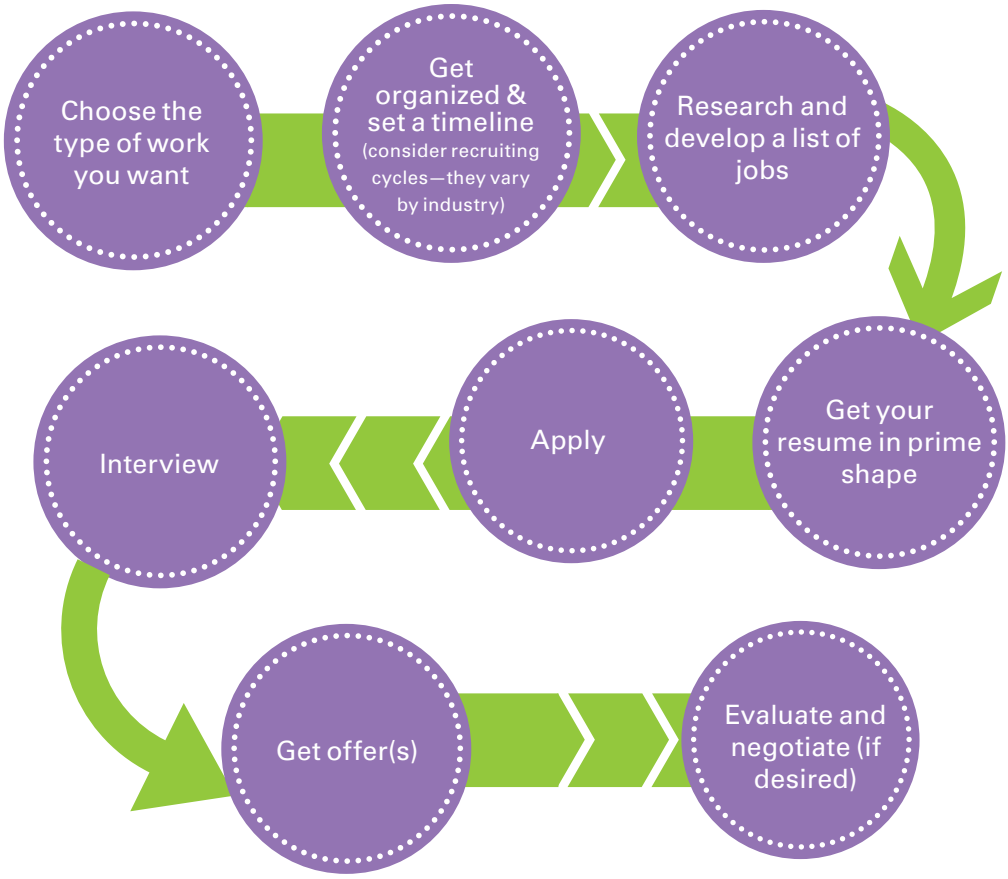
Recruiters may find you through keywords.

The Job Search

How Graduates Found Jobs	Bachelors	Masters	PhD
Internship led to job offer	31%	17%	6%
Career fair	23%	8%	4%
Networking	23%	26%	27%
On-campus recruiting	22%	17%	5%
Directly applied to employer	20%	15%	26%
Contacts from MIT Career Services, faculty, academic departments	8%	8%	18%
Externally-advertised job listing (online, print)	4%	3%	1%
MIT-sponsored job listings, employer database, INET	3%	5%	11%
Returning to or continuing employment	<1%	12%	-
Academic or professional conference	-	-	5%

Graduates could check all that applied, so numbers will total more than 100%.

Job Search Action Plan



Career Fairs

Prepare

Research companies in advance; identify locations of ideal employers especially at the large fairs

What to Wear

Dress according to your profession; overdressed is better than underdressed

What to Bring

- 2 resumes per employer
- pens and paper
- portfolio as writing surface and to hold your resumes

What to Say

Have a 60-second elevator pitch ready and rehearsed (see the next page for developing one)

What to Ask

Prepare a list of questions in advance that demonstrate your knowledge of the company

Follow-up

Be sure to get names and business cards of individuals you speak with so that you can write a thank-you email

Possible Questions to Ask Employers at a Career Fair

- How long have you worked at your company?
- Does your company hire on a continual basis or only at certain times of the year?
- What are the most important qualifications your company looks for in an employee?
- Are there particular personality traits you look for?
- Are graduate degrees important? In what areas within your company?
- What kinds of courses do you suggest in order to be a successful candidate?
- Is there a GPA cut-off for your recruiting process?
- What kinds of entry-level positions exist within your organization that would be open to someone with my background?
- What is the training process like at your company?
- Is senior management grown from within or does your company hire from the outside?
- Do you sponsor non-US citizens?

For a listing of current fairs:
https://capd.mit.edu/jobs-and-internships/career-fairs-and-company-presentations

Elevator Pitch

Identify the goal of the pitch	Clearly describe what you do	Focus on strengths	Credit and/or compliment	Engage listener with a question
• Self-introduction • Advertisement • Building a connection	• What you study, research, build, make • Past experiences	• Unique ideas, recent activities, latest accomplishments	• Team members, supervisors, mentors	• Offer an opportunity to respond

Avoid Missed Opportunities

Often times, we miss opportunities because of our lack of intent, preparation, or comfort in commonplace conversations. We can also miss an opportunity to effectively communicate by minimizing or overinflating discussions of responsibilities and accomplishments.

Do Your Research

Developing a meaningful elevator pitch requires research on the person, company, organization, or program that you are making a connection with. You should pinpoint qualifications, skills, and experiences that best align with the opportunity and reiterate interest in learning more.

Body Language

Be mindful of body language and use hand motions moderately. Maintaining enthusiasm and energy is significant. If you jitter in nervousness, consider grounding your feet to the floor and lean in when appropriate. And most importantly, don't underestimate the power of a smile.

Managing Anxiety and Self-Doubt

Engaging in persuasive speech and talking about yourself can be a daunting experience that stirs up anxiety and self-doubt. Manage your angst with breathing techniques, power poses, inspirational quotes, positive attitude, and humor.

You have 60 seconds to convince an employer to engage you further

Elevator Pitch *continued*

Practice, Practice, Practice

Assess the content you might add to your elevator pitch, acknowledge your successes with confidence, examine your body language, and identify growth areas to continue strengthening your pitch. You can practice your elevator pitch on your own, with a friend or mentor, or with a counselor at CAPD. Even while you practice, don't forget to dress the part, sometimes a blazer goes a long way. Be sure to focus on the message and being true to yourself—authenticity is impressive!

Examples

"Hi, my name is Zoey Ali and I am a junior studying Material Science and Engineering with a minor in Computer Science. Last summer I interned at 3M working on a project with a team assessing the heat resistance of a new plastics product. I was able to use my skills in software engineering to analyze past product failures and predict upcoming product failures. While I am knowledgeable in statistical applications, I also have a strong background and interest in metals, energy, and manufacturing. It's definitely been reassuring to see Boeing's commitment to those areas in the last few years. What are the most collaborative projects that interns typically work on at Boeing?"

"Hi, my name is Jin Xia and I am a sophomore majoring in Biological Engineering. I am currently working in the laboratory of Dr. Lin, where our research is focused on correcting mutations that cause organ diseases. While my research is in the early stage, I have successfully demonstrated that the CRISPR technology method works in my hands. I plan to combine this experience working with DNA sequences with the knowledge that I have gained in my computer science courses, to contribute to the field of computational biology. I understand that your company has a significant program in this area. Can you please tell me more about the ongoing projects in computational biology and the opportunities you have?"

Outline of a Possible Elevator Pitch

Greeting	Hello, my name is…
Year in School	I am a (sophomore, junior, etc.)…
Major	majoring in…
Experience	I have done (research, projects, etc.) on…
Accomplishments	I have (produced, presented, written)…
Seeking	I am seeking a(n)…(internship, full-time job, etc.)
Question	I know your company has a program on (X, Y, Z), can you tell me a little bit about the ongoing projects in which interns could participate?

Resumes: Writing About Your Skills

Your resume provides an overview of your experience and is often an employer's first impression of you. Recruiters spend just a few seconds on average looking at a resume so it is crucial to use a format that makes relevant information immediately visible. A good resume can help you land an interview, but even minor errors can take you out of the running. Bring your resume to Quick Queries or schedule an appointment with a counselor to ensure it will be effective. You can also upload your resume to VMock at **https://www.vmock.com/mit** to receive instant resume advice based on the metrics of other MIT undergrads, grad students, and postdocs.

For each experience on your resume, write a **PAR** statement:

P: Describe the PROJECT, the context, task or job.

A: What ACTIVITY did you do?

R: What were the RESULTS, outcomes, benefits?

Samples of how to best represent your experiences:

Before:
Cambridge Performing Center, Cambridge, MA — May 2015-June 2016
Theatre Marketing Intern
Responsibilities included coordinating artist press releases, compiling tracking sheets based on information from reservations and box office attendants, handling photo and press release mailing to media, assisting in radio copy writing and performing various other duties as assigned.

After:
Cambridge Performing Center (CPC), Cambridge, MA — May 2015-June 2016
Theatre Marketing Intern
- Coordinated press releases that contributed to an increase in annual sales by 10%
- Compiled and maintained a mailing list of 10,000 customers, CPC's largest ever
- Organized photo and press releases to XYZ Television and Cambridge Daily News
- Contributed to the copy writing of promotional radio commercials for five events

Before:
Bright Consulting Group, New York, NY — June-August 2016
Marketing Analyst
I analyzed competitive strategies for clients in the bio tech industry. Data gathered assessed profitability of strategies

After:
Bright Consulting Group, New York, NY — June-August 2016
Marketing Analyst
- Assessed profitability of expansion strategy in the biotech industry; results were used by the client to make market entry decision
- Gathered data, as part of a three-member team, by interviewing over 100 potential customers and presented the results to the clients

Use concrete action verbs (see page 23) and quantify items when possible.

Resumes: Writing About Your Skills *continued*

Samples of First-Year PAR Statements

Math Team Captain
Organized review sessions for 15 participants and scored practice tests, leading team to Top 5 finishes in the Arizona State Math League.

National Honor Society Service Chair
Coordinated the Senior Citizens Ball, which raised $1500 for a new Senior Activities Center.

Swim Instructor
Taught children between the ages of four and six basic swimming techniques to promote water safety and awareness.

Radio Shack Assistant Manager
Communicated product details and provided exceptional customer service to 50+ people per day. Promoted from cashier to Assistant Manager after only four months.

Burger King Team member
Worked in a fast-paced environment, received food-handling/cashier training, and experienced assembly line teamwork.

Examples of Upperclassman/Graduate Student PAR Statements

Undergraduate Researcher
- Investigated effects of gas phase oxygen concentration levels on Chinese Hamster Ovary cells in order to establish optimal settings for cell growth.
- Reduced cell division time by 30%.

Safety & Regulatory Engineering Intern
- Performed electromagnetic compatibility testing on X-ray, Ultrasound, and CT devices to ensure proper functionality.
- Reduced RF emissions of medical equipment by 50%.

Project Manager for Senior Design Team
- Analyze and evaluate current layout of the window fabrication facility.
- Collect and interpret flow data and presented results to the 5-person management team.

Summer Engineering Intern
- Analyzed office layout and curtain walls using CAD skills.
- Assisted applications engineers in preparing stamped structural calculations.

Software Intern
- Incorporated new algorithms into pipeline simulation modules and achieved a tenfold increase in speed.

YOUR TURN			
Experience	**Project**	**Activity**	**Result**
e.g. Undergrad researcher	Cell growth optimization	Investigated effects of oxygen concentration	Reduced cell division time by 30%

Action Verbs

Management Skills
Administered
Analyzed
Assigned
Chaired
Consolidated
Contracted
Coordinated
Delegated
Developed
Directed
Evaluated
Executed
Organized
Oversaw
Planned
Prioritized
Produced
Recommended
Reorganized
Reviewed
Scheduled
Supervised

Communication Skills
Addressed
Arbitrated
Arranged
Authored
Co-authored
Collaborated
Corresponded
Developed
Directed
Drafted
Enlisted
Formulated
Influenced
Interpreted
Lectured
Mediated
Moderated
Negotiated
Persuaded
Promoted
Proposed
Publicized
Reconciled
Recruited
Spoke
Translated
Wrote

Research Skills
Clarified
Collected
Critiqued
Diagnosed
Evaluated
Examined
Extracted
Identified
Inspected
Inspired
Interpreted
Interviewed
Investigated
Organized
Reviewed
Summarized
Surveyed
Systemized

Technical Skills
Assembled
Built
Calculated
Computed
Designed
Devised
Engineered
Fabricated
Maintained
Operated
Pinpointed
Programmed
Remodeled
Repaired
Solved

Teaching Skills
Adapted
Advised
Clarified
Coached
Communicated
Conducted
Coordinated
Developed
Enabled
Encouraged
Evaluated
Explained
Facilitated
Guided
Informed
Instructed
Lectured
Persuaded
Set goals
Stimulated
Taught
Trained

Financial Skills
Administered
Allocated
Analyzed
Appraised
Audited
Balanced
Budgeted
Calculated
Computed
Developed
Managed
Planned
Projected
Researched

Creative Skills
Acted
Conceptualized
Created
Customized
Designed
Developed
Directed
Established
Fashioned
Illustrated
Instituted
Integrated
Performed
Planned
Proved
Revised
Revitalized
Set up
Shaped
Streamlined
Structured
Tabulated
Validated

Helping Skills
Assessed
Assisted
Clarified
Coached
Counseled
Demonstrated
Diagnosed
Educated
Facilitated
Familiarized
Guided
Inspired
Motivated
Participated
Provided
Referred
Rehabilitated
Reinforced
Represented
Supported
Taught
Trained
Verified

Clerical or Detail Skills
Approved
Arranged
Catalogued
Classified
Collected
Compiled
Dispatched
Executed
Filed
Generated
Implemented
Inspected
Monitored
Operated
Ordered
Organized
Prepared
Processed
Purchased
Recorded
Retrieved
Screened
Specified
Systematized

Stronger Verbs for Accomplishments
Accelerated
Achieved
Attained
Completed
Conceived
Convinced
Discovered
Doubled
Effected
Eliminated
Expanded
Expedited
Founded
Improved
Increased
Initiated
Innovated
Introduced
Invented
Launched
Mastered
Originated
Overcame
Overhauled
Pioneered
Reduced
Resolved
Revitalized
Spearheaded
Strengthened
Transformed
Upgraded

From To Boldly Go: Practical Career Advice for Scientists, *by Peter S. Fiske*

Resume Checklist

General Format

	Have you used Microsoft Word? Do not use a template; applicant tracking systems have trouble reading it.
	Are the margins consistent and > 0.5 inches and < 1 inch?
	Is your font size > 10 pt and < 12 pt? Is the font easy to read (Arial or Times New Roman, etc.)?
	Have you kept it to one page? You may use two pages if you have an advanced degree or extensive experience (10+ years).
	Have you left enough white space to make it easy to read?
	Have you used boldface and italics appropriately (headers or positions) and avoided underlining?
	Are dates clear and consistent? Is format and punctuation consistent?
	Are sections listed in order of importance to the employer?
	Are heading names descriptive (e.g. Research Experience, Leadership & Service, etc.)?

Contact Information

	Is your legal name clear and bold at the top? (also on the second page if applicable)
	Is your phone number included? Do you have a professional voicemail recorded?
	Is your email address included? Does it sound professional?
	If you are a U.S. citizen or hold a permanent resident VISA, did you include this if readers might think otherwise?

Education

	Are college/university names spelled out? (i.e. Massachusetts Institute of Technology not MIT)
	Did you list the official name of your degree or course?
	Did you list the month and year you earned, or expect to earn, your degree?
	Did you consider listing your GPA if strong (include scale if you list the GPA)
	Did you list coursework that aligns with your job search?

Experience

	Did you clearly list the organization/company name and your job title?
	Did you include the city and state (or country) in which you worked?
	Are the dates of employment listed for each?
	Did you list the project, activity, and results for each experience?
	Did you start each phrase with an action verb? (tenses: Past for past work, present for ongoing work)
	Did you give evidence and quantify relevant information (e.g. size, scale, budget, staff) for impact?
	Have you used keywords that apply to your industry and/or the job listings?
	Have you avoided the use of "I"?
	Have you considered and included all aspects of your experiences related to the job opening(s)?

Skills

	Have you included all relevant skill types (Programming languages, Foreign language, Lab skills, etc.)?
	Did you list all relevant skills within each skill type?

Activities/Honors/Leadership

	Did you list the activities, honors, and/or leadership experiences that are relevant?

Sample Resumes

First-Year Resume Sample

First Name Last Name

Room 123 MIT Dorm, 987 Institute Drive • Cambridge, MA 02139 • Phone: 617-xxx-xxxx • Email: Freshman@mit.edu

Education

Massachusetts Institute of Technology (MIT) — Cambridge, MA
Candidate for Bachelor of Science in Biology — June 2019
Coursework includes: Calculus, Electricity and Magnetism.

Southtown High School — Southtown, NS
Valedictorian in class of 128 students; SAT: 2260, ACT: 33 — May 2015
Relevant Courses: AP Calculus, AP Statistics, AP Biology.

Leadership Experience

MIT Undergraduate Giving Campaign — Cambridge, MA
Class of 2019 Co-Chair — November 2015
- Trained 12 members from the freshman class in fundraising activities, such as how to ask for a donation and how to properly document a donation.
- Organized a week-long schedule for the 12 members and myself to work at a booth to ask for donations.
- Achieved 31% participation within the freshman class, higher than that of the sophomores and juniors.
- Raised $1,250 from the freshman class for the MIT Public Service Center.

High School Newspaper — Southtown, NS
Chief Editor — August 2014-May 2015
- Proofread each article and authored two to three articles per issue.
- Printed one 24-page newspaper per month for 10 months.
- Oversaw staff of 14 students. Answered questions regarding articles and page design.

Assistant Editor — August 2012-May 2013
Sports Editor — August 2011-May 2012

Relay For Life — W. Southtown, NS
Team Captain — April 2013
- Organized a team of 15 students for the Relay for Life.
- Coordinated fund-raising efforts through the Beta Club, an organization for students with all A's.
- Raised $500 for cancer research.

Work Experience

Area Supermarkets — W. Southtown, NS
Clerk and Bagger — January 2013-May 2013
- Provided customer service to 100+ people per day. Bagged groceries and received cashier training.

Taco Bell — W. Southtown, NS
Team Member — June 2012-January 2013
- Received cashier and food handling training, worked in a fast-paced environment, and experienced assembly-line teamwork. Served 100+ people per day.

Activities & Awards

MIT Varsity Track & Field Team — September 2015-Present
Team Member, Pole Vaulting.

High School Varsity Athletics — August 2011-May 2015
Track and Field, *Captain*; Football, *Team Member*; Wrestling, *Team Member.*

STAR Student Award — March 2014
Awarded to the senior from each high school in Newstate with the highest SAT score.

Havoline Scholar Athlete Award — December 2013
Presented by The National Football Foundation and College Hall of Fame, Inc. to the top 40 scholar athletes in the state of Newstate.

Skills

Computer: Microsoft Word, Excel and PowerPoint

Carpentry: Framing, Masonry, Household Electrical Wiring, Flooring, Roofing, Plumbing.

As a first-year undergrad you can include GPA N/A on your resume until you receive an official MIT GPA (typically at the end of your second semester).

First-Year Resume Sample

University Address
300 Memorial Drive
Cambridge, MA 02139

MIT STUDENT

Home Address
4000 Home St.
Hometown, NY 12345

EDUCATION

Massachusetts Institute of Technology (MIT) **Class of 2019**
Cambridge, MA

- Candidate for Bachelor's in Managerial Science with a Concentration in Finance
- SAT: 2160, GPA N/A
- Current Coursework: Differential Equations, Macroeconomics, Biology, Freshmen/Alumni Summer Internship Program (F/ASIP)
- Relevant Courses: Multivariable Calculus, AP Calculus BC, AP Statistics, AP Biology

LEADERSHIP EXPERIENCES

UROP-Diabetes Management Project **February 2016-Present**
Research Assistant Cambridge, MA

- Research different areas of diabetes management including aspects in both technology and lifestyle
- Analyze qualitatively and quantitatively information from patient surveys

GRT Selection Committee **February 2016-Present**
Student Member Cambridge, MA

- Collaborate with 15 team members to dictate procedure on how to pick the next GRT
- Conduct behavioral interviews for the candidates
- Vote on which candidates will be considered

Procrastibaking Baking Club **November 2015-Present**
Treasurer Cambridge, MA

- Manage approximately $1,100 in club funds and reimburses the President's expenses
- Responsible for budgeting multiple club events, which provide customer satisfaction to all 45 participants

Maseeh Hall Executive Committee **December 2015-Present**
Floor 2 Representative Cambridge, MA

- Manage a $1,000 budget to put on events such as "study-breaks", social events, which include free food to 30 people and time to take a break from work
- Provide for the maintenance of 150 floor members' needs by both buying products that are necessary for the floor and helping students with any personal problems

Robotics/Engineering Club **September 2012-June 2015**
VP of Community Relations, Treasurer, Build Team Member Seaford, NY

- Raised $9,000 by pitching advertising packages to local businesses in order to fund the team
- Presented projects to judges, which helped win the All Star Rookie Award and the Highest Seeded Rookie Award, resulting in the team going to Worlds
- Coached new members on how to present themselves to businesses and judges

WORK EXPERIENCE

MIT Admissions Representative **September 2015- Present**
Student Representative Cambridge, MA

- Address student's concerns about the application process through the phone and email, answering 100 questions per shift when deadlines are approaching
- Create expense reports to reimburse admissions counselors for their business expenses

Tarallo's Pizzeria **September 2014-August 2015**
Counter Position Seaford, NY

- Worked as a cashier; Received food, phone, and cleaning training, worked in a fast-paced environment, while keeping impatient and hungry customers calm

SKILLS/INTERESTS

Computer: Microsoft Word, Excel, PowerPoint, Basic Java
Language: Fluent in reading and writing Spanish, Proficient in Speaking Spanish
Interests: Dancing, Lifting Weights, Trying different types of food

Undergraduate Resume Sample

JANE DOE

School Address:
XXX Memorial Dr.
Cambridge, MA 02139

someone@mit.edu
(XXX) XXX-XXXX

Home Address:
Someplace, MA

Education

MASSACHUSETTS INSTITUTE OF TECHNOLOGY (M.I.T.) — **CAMBRIDGE, MA**
Candidate for B.S. in Biology, GPA: 4.6/5.0 — *20XX*

- Concentration in Management at Sloan Business School and Minor in Brain and Cognitive Sciences.
- Authored 5 publications in the *MIT Undergraduate Research Journal* and other peer-reviewed journals.
- Relevant Coursework: Finance Theory, Economics of the Health Care Industry, Strategic Decision-Making in Life Sciences, Building a Biomedical Business, Cancer Genetics and Therapies, Cellular Neurobiology, Immunology.

Experience

PUTNAM ASSOCIATES — **BURLINGTON, MA**
Analyst — *20XX*

- Evaluated in 6-member team whether client's marketing strategy for its $100M organ transplant drug effectively targets key decision-makers in transplant community. Client implemented proposed improvements in message content and delivery, designed to increase prescriptions for product by nearly 30%.
- Managed recruitment and interviewing process of 98 physicians to obtain primary data for marketing case. Analyzed data from interviews and secondary research in Excel/Access. Prepared PowerPoint deck for presentation to client.
- Analyzed past product switches from predecessor to successor drugs for independent project. Presented recommendations for future drug launches. Developed a database providing key criteria for launching various types of drugs.

MIT PROGRAMS ON THE PHARMACEUTICAL INDUSTRY — **CAMBRIDGE, MA**
Health Economics Research Assistant, Sloan Business School — *20XX*

- Designed, created, and tested a strategic model for the pharmaceutical industry that analyzes safety, efficacy, and economics to forecast (prior to clinical trials) which drugs will succeed on the market. Early elimination of inadequate drugs will significantly reduce the $800M spent to successfully launch a drug.

MERCK & CO., INC. — **RAHWAY, NJ**
Pharmaceutical Laboratory Research Assistant, Infectious Disease Department — *20XX*

- Identified deficiencies in Type 2 Diabetes drugs on the market and screened chemicals on new cellular targets to develop an efficient drug without these shortcomings. Drug predicted to obtain substantially greater market share in the $14B oral Type 2 Diabetes drug market compared to competitors.

MIT CENTER FOR CANCER RESEARCH — **CAMBRIDGE, MA**
Academic Laboratory Research Assistant, Housman Laboratory — *20XX - 20XX*

- Developed a product to recognize activity of a cancer-causing gene, aiding in discovery of drug for brain cancer. Engaged in all stages of product development: identification of market need, engineering of product, collaborating with industry for testing, production, and marketing of final drug.
- Designed a new sequencing technique that refines a common laboratory protocol. New procedure increases efficiency by 50% on average, reducing processing time by 25%, and creating more usable biological end-product.

Leadership

MARCH OF DIMES BIRTH DEFECTS FOUNDATION — **BOSTON, MA**
Director of Massachusetts Youth Public Affairs — *20XX - Present*

- Lobbied legislators to encourage federal, Massachusetts, and California governments to develop public policies to improve the health of women. Introduced and promoted 10 Senate Bills, 4 of which have been approved thus far.
- Represented Foundation on the Massachusetts State Public Affairs Committee.
- Organized conferences and fundraisers as a volunteer for the past 7 years (1998-Present).

JOURNAL OF YOUNG INVESTIGATORS — **CAMBRIDGE, MA**
Story Editor and Science Journalist — *20XX - Present*

- Managed 25 science journalists, delegated writing and editing tasks, and chose articles to print in monthly journal.
- Created daily digests about current science news, distributed to all science journalists.

SCIENCE & ENGINEERING BUSINESS CLUB — **CAMBRIDGE, MA**
Consulting Focus Group Organizing Committee — *20XX - Present*

- Organized 6 campus-wide information session to educate students about careers in consulting and law.
- Selected and worked closely with speakers from diverse occupational backgrounds.

Awards & Interests

- Robert C. Byrd Scholarship, awarded to top 1% of U.S. students for academic excellence.
- Rensselaer Medal, awarded to top 20,000 students worldwide for achievements in mathematics and science.
- Interest in track & field, travel, photography, and oncology.

Undergraduate Resume Sample

Matha Maddox

345 Infinity Drive
Cambridge, MA 02139

matha@mit.edu
617-XXX-XXXX

My Street
My City, My Country

EDUCATION

Massachusetts Institute of Technology (MIT) — **Cambridge, MA**
- Candidate for a Bachelor of Science degree in Mathematics with Computer Science — June 2013
- Candidate for a minor in Management — GPA: 4.6/5.0
- Relevant Coursework: Probability and Statistics, Algebra, Analysis, Discrete Math, Managerial Psychology Laboratory

EXPERIENCE

Telecommunications Company — **Paris, France**
Operations Research Analyst — June 2010 – Present
- Assessed financial risks involved with participating in online advertising-space exchanges
- Devised bidding policies for auctions at the exchanges that led to victories three times out of five and built mathematical models around these policies to increase the company's margin from online ad-spaces by 5%

MIT Sloan School of Management — **Cambridge, MA**
Undergraduate Researcher — June 2010 – October 2010
- Conducted experimental prediction markets with human and artificial intelligence to find the best tools to predict future events such as election-results or the stock market
- Developed an experiment-procedure online that reduced bias by eliminating involvement of the experimenter and saved two hours and $200 per experiment

MIT Center for Collective Intelligence — **Cambridge, MA**
Undergraduate Researcher — June 2010 – October 2010
- Conducted individual and group IQ/EQ tests on human subjects to formulate ways to measure and predict the performance of individuals working as part of a team and the efficacy of the team dynamic
- Saved four hours of experiment-time per day by redesigning the experiment-procedure so that each experiment could be held with three fewer researchers and up to six experiments could be held at the same time

MIT Tech Callers — **Cambridge, MA**
Caller — February 2010 – June 2010
- Communicated with MIT alumni on behalf of the MIT Alumni Association and raised $5,000 in donations

LEADERSHIP

MIT Student Cultural Association — **Cambridge, MA**
Treasurer — May 2010 – Present
- Managed $10,000 worth of finances for a group of 400 students and raised $3,000 in funds for their events
- Created an online system for reimbursements that made the process faster and reduced paperwork

MIT Undergraduate Association — **Cambridge, MA**
Member of Committee on Student Life — February 2011 – Present
- Organized a week long convention of 3,000 students with activities geared towards improving health on campus
- Linked 376 freshmen to upperclassmen with similar career objectives in a one-on-one mentoring relationship

MIT International Science and Technology Initiatives — **Milan, Italy and Cambridge, MA**
Advisor and Teacher — September 2010 – March 2011
- Taught Mathematics and Physics to 500 high school students in Italy and advised teachers on inexpensive ways of making their lessons interactive that helped each school save up to $1300 a year
- Worked with a group of 10 teachers and five principals from high-schools in Italy to prepare a report for the Italian Ministry of Education on how to make the education-system in Italy more hands-on and technology-oriented

The XYZ Newpress — **My City, Country**
Founder and Editor — October 2006 – May 2008
- Led a staff of 25 high-school students to develop the first English newspaper to be printed and distributed in My Country
- Converted it to a trilingual newspaper and increased profitability by 25% in two years

SKILLS

Languages: Fluent - French and Native - Hindi
Software: LATEX, GLPK, Microsoft Office
Activities: Member-Delta Psi Fraternity, Choreographer - MIT Dance Troupe, Journalist -*The Tech*

Design Resume Sample

Christie Lee

email clee@mit.edu
mobile 650 353 8566
portfolio clee.github.io
blog www.christie.com
address 450 Memorial Drive, Cambridge MA 02139

Education

Massachusetts Institute of Technology — *Cambridge, MA*
Candidate for B.S. Architecture | *GPA* 4.5/5.0 — June 2016

Relevant Projects

Back Bay Children's Mediathèque — *February - May 2015*
Skills: Rhino3D, Grasshopper for Rhino3D, VRay, Adobe Illustrator, Adobe Photoshop

- Conceptualized a children's mediatheque based on field conditions across time.
- Collected real-time traffic data around the site in Back Bay and created data visualisaton rhythmic drawings.
- Explored unit design and aggregation systems to create a cohesive architectural project.

Summer Street Fitness Center — *September - December 2014*
Skills: Rhino3D, Adobe Photoshop, Adobe Illustrator

- Conceptualized a fitness center to direct viewpoints towards programs of interest.
- Experimented with the relationship of carving and packing programs to direct the visitor's focus towards the center of the space.
- Explored the effects of changing wall and ceiling geometries to create special vantage points in certain locations of the center.

Work Experience

New Valence Robotics — *January 2016*
Education Design Intern

- Designed interactive models with Rhino 3D concurrent with Common Core standards for the enhancement of education in local schools and wrote corresponding lesson plans.

Involution Studios — *June - August 2015*
Design Intern

- Researched, designed and co-wrote a manifesto with bioengineering Johns Hopkins student as a feature for the studio website using HTML/CSS with Bootstrap.
- Created data visualisations for the feature in D3.
- Conceptualized a plan to exhibit Involution Studios Care Cards on Arlington Whole Foods.

Howeler + Yoon Architecture — *June 2014 - May 2015*
Design Intern

- Iterated designs and built prototypes of the Collier Memorial with Grasshopper for Rhino 3D to engineer the vaults and shape the masonry for structural stability on the MIT campus.
- Conducted geometry studies, physically with paper and digitally with Rhino3d, for the Lawn on D swing installation in Boston.

Skills

Softwares

- Rhino 3D
- Autodesk Maya
- AutoCAD
- Autodesk Revit
- Autodesk 3d Studio Max Design
- Unity
- Vuforia SDK
- Processing
- Adobe Photoshop
- Adobe Illustrator
- Adobe InDesign
- Adobe Premiere
- HTML/CSS
- Bootstrap
- D3
- Grasshopper
- Python

Other

- Game design
- Graphic design
- Illustration
- Traditional fine art
- Photography
- Wood-working and shop tools
- Lasercutting
- sketching

Languages

- Mandarin (fluent)
- English (fluent)
- Spanish (intermediate)

Awards

- Grand Prize in Boston-wide art competition for a 9' x 9' painting

Leadership + Activities

- MIT Dramashop
  - 2014 - 2016 Publicity Director
  - 2014 Fall One Acts producer
  - 2013 - 2014 Secretary
- MIT Asian Dance Team
- Undergraduate Practice Opportunities Program

Interests

- blogging and writing
- cooking, baking, and eating
- painting and drawing
- toy making
- sewing and pattern drafting
- knitting and crochet

Global Resume Sample

MIT Student

522 Commonwealth Ave, Boston, MA 02215 • 333-111-2222 • travelingstudent@mit.edu

EDUCATION

Massachusetts Institute of Technology — 2012-2016, Cambridge, MA
- BS in Biological Engineering, GPA: 4.9/5
- *Sabancı Freshman Scholar,* awarded visit to Sabancı University in Istanbul (2014)
- Foreign study at Universidad Politécnica de Madrid in Biotechnology (Spring 2015)

Collège Saint-Remacle à Stavelot — 2011-2012, Stavelot, Belgium
- Achieved Grande Distinction during foreign exchange in French-speaking Belgium

Southern Lehigh High School — 2007-2011, Center Valley, PA
- Six week foreign exchange in Röhrnbach, Germany (Summer 2009)

EXPERIENCE

Undergraduate Researcher in Weiss Lab, MIT Synthetic Biology Center — Dec 2014 - Present, Cambridge, MA
- Create platform for biosensor development based on B-cell receptor
- Awarded provisional patent (2014)
- Presented poster at 2015 BioMAN Summit (Cell & Gene Therapy Manufacturing)
- Advisor for MIT iGEM 2015 team

Intern in Rojas Lab (Instituto de Salud Carlos III) — Mar 2015 - Jun 2015, Madrid, Spain
- Investigated role of Sur8 in nucleus by verifying binding to potential partners
- Analyzed proteomics & microarray data to examine effects of Spry2 mutations

International Genetically Engineered Machine (iGEM) Participant — Jan 2014 - Nov 2014, Cambridge, MA
- Developed genetic circuit for Alzheimer's disease detection and treatment
- Shared research through presentation, poster, and website
- Awarded gold medal in synthetic biology competition as part of MIT's team

Undergraduate Researcher in Ploegh Lab (Whitehead Institute) — Sep 2013 - Jan 2014, Cambridge, MA
- Generated and purified VHH fragments against glycolytic enzymes
- Assayed effects of VHH fragments on enolase & pyruvate decarboxylase function

Summer School in Radiobiology (SCK-CEN) — Jul 2013, Mol, Belgium
- Studied cancer pathology, radiation treatment, and space microbiology

SKILLS

Laboratory Techniques : Cloning, SDS-PAGE/Western blot, mammalian tissue culture, transient transfection, protein purification

Programming : Familiarity with MATLAB, Python, and Java

Languages : English (native), French (fluent), Spanish (fluent), German (basic), Portuguese (basic)

LEADERSHIP & SERVICE

Stop Our Silence President (2015-2016), Co-President (2014-2015), Treasurer (2013-2014)
- Organize slam poetry events and theatrical productions to promote sexual assault awareness
- Raise over $1000 yearly for local women's shelter

Freshman Associate Advisor (2013-2014, 2015-2016)
- Advise first-year students in biology-focused seminar

Women in Science and Engineering (WiSE) Mentor (2013-2014)
- Mentored high school girls in monthly sessions on topics in science and engineering

Member of Alpha Chi Omega (2014-Present)

Masters Resume Sample

Student Enviro Eng

Environment St.
Cambridge, MA 02139

Phone: 617-xxx-xxxx
Email: EnviroEng@mit.edu

EDUCATION

Massachusetts Institute of Technology (MIT) – Cambridge, MA
Master of Engineering in Enviromental Engineering 2014 (expected)

- Relevant Coursework: Strategies for Sustainable Business, Systems Dynamics, Sustainable Energy, Applications of Technology in Energy and the Environment, Design for Sustainability

Cornell University – Ithaca, NY
Bachelor of Science in Civil and Environmental Engineering 2010

- GPA 3.57/4.00 (**Cum Laude**), Chi Epsilon Honors Society
- Semester Abroad, University of Melbourne, Melbourne, Australia, 2004
- Relevant Coursework: Engineers for a Sustainable World, Sustainable Small-Scale Water Supplies, Solving Environmental Problems for Urban Regions

EXPERIENCE

Camp Dresser & McKee (CDM) – Cambridge, MA
Environmental Engineer 2010-2012

Harvard University Allston Campus

- Delivered sustainable technology assessment to compliment the campus's low-carbon design strategy. Presented findings to 50 employees through teleconference.
- Managed the design development of the utility system; wrote 4 chapters of 13 chapter report. Coordinated submittal of design report and associated CAD drawings.
- Facilitated a multi-discipline (6), multi-consultant (15) project team; led client, agency and subcontractor communications; developed technical reports and $300,000 budget; managed staff of lower grade levels.
- Technical lead for the evaluation of on-site deep heat geothermal energy; performed a cost analysis and carbon inventory. Wrote 5 of 8 chapters of the feasibility report.
- One of 15 chosen from 4,000 employees to be featured in the company's annual report.

Sustainable Wastewater Treatment Plant Design

- Secured a Massachusetts Technology Collaborative (MTC) grant for the feasibility of converting fats, oils and greases to biofuels to jointly reduce a sewer system nuisance and the plant's reliance on fossil fuels.
- Evaluated sustainable features for a wastewater treatment plant upgrade including an assessment of stormwater management, green building design and construction, and potential energy technologies targeted to reduce operating costs. Recommendations included in 30% project design submittal.

City of Salem Water Conservation Planning

- Developed water conservation recommendations and a comprehensive implementation plan for the city's Engineering Department.
- Recommendations embraced by the City Mayor. Presented findings to the community at a televised public meeting.

Sulabyia, Kuwait Wastewater Treatment Plant

- Evaluated the potential for innovative disposal options for reverse osmosis waste brine at the Sulabyia, Kuwait wastewater treatment plant.
- Specifically evaluated options for wetland treatment, saline farming, irrigation of turf fields, bioreactor landfill water source, phosphorus recovery, and deep well injection.

Engineers for a Sustainable World – Ithaca, NY/La 34, Honduras
Project Team Member 2009-2010

- Designed a water treatment plant for the small village of La 34, a farming community of approximately 100 families near the northwest coast of Honduras.
- Trained community members to self-sufficiently run the water treatment plant; plant is still operating successfully.

Cornell University – Ithaca, NY
Teaching Assistant/Laboratory Assistant 2009-2010

- Helped 40 students design, build and automate miniature water treatment plants using LabVIEW software.
- Facilitated a fluid mechanics laboratory including the setup and supervision of hydraulic experiments.

University of Southern California/Camp Dresser & McKee (CDM) – Los Angeles, CA
Sustainable Cities Undergraduate Fellow 2010

- Worked with diverse team of students, academic and professionals to incorporate urban sustainability into the development of a rapidly expanding Los Angeles School District school system.
- Recommended sustainable features adopted in a prototype environmental impact report.

CERTIFICATIONS AND SKILLS

- Engineer in Training, April 2010
- Hydraulic calculations using MathCAD
- Eligible for Professional Engineering Licensing Exam in 2014
- Water Distribution Modeling using H2OMap Water

Masters Resume Sample

Charles Meng

100 Charles St., Cambridge, MA 02139 ☞ 617.123.4567 ☞ csmeng@mit.edu ☞ csmeng.github.io

EDUCATION

Massachusetts Institute of Technology (MIT) *Cambridge, MA*
Candidate for Master of Engineering in Computer Science; GPA: 5.0/5.0 *Expected June 2015*
Bachelor of Science in Computer Science; GPA: 4.6/5.0 *June 2014*

- Concentration: Human-Computer Interaction
- Master's Thesis: "Search Tools for Scaling Expert Code Review to the Global Classroom"
- Relevant Coursework: User Interface Design, Computer Graphics, Design and Analysis of Algorithms, Performance Engineering, Artificial Intelligence, Principles and Practices of Assistive Technologies, Entrepreneurship Project, Computer Vision, Evaluating Education

EXPERIENCE

User Interface Design Group; CSAIL, MIT *Cambridge, MA*
Researcher *Oct. 2013–Present*

- Designing search tools to allow teachers to give qualitative feedback beyond "correct" or "incorrect" to tens of thousands of students' code submissions.
- Building a search engine to increase efficiency of writing feedback to individual students.
- Developing techniques to cluster student code so teachers may powergrade multiple students' code at once.

Assistive Technologies; MIT *Cambridge, MA*
Student leader *Feb. 2014–Present*

- Mentoring students in an MIT undergraduate course in which teams design and build assistive software, hardware, or mechanical devices for an individual in the community living with a disability.
- Founding member of MIT's first assistive technology hackathon, a two-day event based upon the MIT course. Recruited five clients in the greater Boston area.

Introduction to Electrical Engineering and Computer Science; MIT *Cambridge, MA*
Teaching assistant to class of over 500 students *Feb. 2014–Present*

- Manage lab assistants. Lectured to over 100 MIT undergraduates at a review session.

Middle East Education Through Technology (MEET) *Jerusalem, Israel*
Curriculum developer *May–July 2014*

- Developed a 3-week curriculum to teach Israeli and Palestinian high-schoolers web programming and Django.

MIT International Science and Technology Initiative *Querétaro, Mexico*
Curriculum developer and instructor *June–July 2013*

- Established a new computer education class tailored to Mexican street children, independently developed curriculum, and taught class in Spanish.

The Server Labs *Madrid, Spain*
Software engineering intern *June–Aug. 2012*

- Created a user interface to facilitate clients setting up a cloud-based virtual environment.
- Presented project in Spanish before a group of cloud computing professionals.

Affective Computing; Media Lab, MIT *Cambridge, MA*
Undergraduate researcher *June–Dec. 2011*

- Introduced a user interface for CardioCam, a low-cost and non-contact technology that calculates heart rate and blood pressure using only webcam imagery.

SKILLS AND INTERESTS

- Django, WebDev Langugages (HTML, CSS, Javascript, jQuery), Python, C++, Java, MATLAB
- Group leader for MIT Varsity Track and Field pole vaulters
- Spanish ☞ Hebrew ☞ Pole vaulting ☞ Gymnastics ☞ Travel ☞ Music

Masters Resume Sample

Joe Resume

77 Massachusetts Avenue
Cambridge, MA 02139

Phone: 617-253-XXXX
Email: XXX@mit.edu

EDUCATION

Massachusetts Institute of Technology (MIT), Cambridge, MA
Masters of Science in Computer Science and Mechanical Engineering **GPA: 5.0/5.0** 2013 (expected)

Indian Institute of Technology (IIT), Madras, India
Bachelor of Technology, Mechanical Engineering **GPA: 9.5/10.0** 2010

- Class Rank 1. (**Summa cum Laude**) – secured a gold medal and three silver medals for overall excellence.
- Published paper on manufacturing process control-*Intl. Journal of Manufacturing Technology and Management*
- **Standardized Test Score:** GRE – Verbal: 720/800, Quantitative: 800/800.

RELEVANT SKILLS

Software Excel spreadsheets including Sensitivity Analysis, Monte Carlo simulation, and modeling uncertainties; C, C++, Matlab, Saphire (probabilistic analysis tool) MS Word and MS PowerPoint.

Courses Coursework covering fundamentals of finance, economics, statistics, risk-benefit and decision analysis, Options in engineering, and engineering math.

Projects Simulated stock prices using Hidden-Markov-Models (Course - Statistics); researched system design optimization techniques as part of a course portfolio (Course - Engineering Options).

EXPERIENCE

Osio Corporation, Boston, MA
Business Intern 2011 – Present

- Developed Excel spreadsheet model for valuation of the start-up's revenue prospects over the next ten years.
- Collaborated with management team in researching and identifying market segments for the new product.
- Currently working on evaluating strategies to be adopted for market deployment and future expansion.

X Corporation, City, State
Part-time Consultant 2011

- Optimized and redesigned the system to reduce manufacturing costs by 40% and system size by 20%.
- Appraised final results of analysis to senior management at the client site and at MIT. Conducted weekly client update sessions

Center for Product Design, Indian Institute of Science, Bangalore, India
Intern for Program in Teaching Innovation 2010

- Deliberated with professors and fellow students on issues concerning barriers to student learning.
- Identified and specified strategies aimed at teaching innovations and translated them into actionable objectives.
- Implemented a key objective by developing a flexible teaching tool for an advanced graduate course.

Bharat Electronics Limited, Bangalore, India
Technical Analyst 2009

- Analyzed a structural component and identified its critical design parameters.
- Redesigned and optimized the component.

LEADERSHIP

- **Chief Course Coordinator, MIT** – Formulated the syllabus and developed the course content for an undergraduate design engineering course. Organized lectures and led undergraduate assistants in conducting lab tutorials for 200 undergraduate students..
- **Innovative Teaching, MIT:** Formulated new teaching approaches as part of an HP sponsored focus-group trial.
- **Community Service Officer, MIT** – Planned and organized community events for fostering greater interactions amongst graduate students. Received **Outstanding Officer Award** for organizational excellence.
- **Circulation Manager and News Reporter, Graduate Student News Magazine, MIT:** Managed monthly distribution of 5000 copies of magazine on MIT campus. Popularized Cryptic Crosswords at MIT.
- **Mentor, IIT Madras** – Mentored 15 freshmen during the senior year at IIT Madras.

INTERESTS AND ACTIVITIES

Story-Telling ✣ Cryptic-Crosswords ✣ Teaching Innovations ✣ News Reporting ✣ Tennis ✣ Piano

HONORS AND ACHIEVEMENTS

Government of India Fellowship (2006-2010) ✣ Certificates of distinction for National Math, Physics and Chemistry Olympiads ✣ Summa Cum Laude in high school ✣ Ranked in top 0.3% for IITs

PhD Resume Sample

JEAN UPEG
Political Economy Ave., Cambridge, MA 02139 Phone: 617-xxx-xxxx • Eamil: Upeg@mit.edu

EDUCATION

Massachusetts Institute of Technology (MIT), Cambridge, MA Fall 2013
Candidate for PhD in Urban Political Economy and Governance
Dissertation: out of Control? Local Democracy Failure and Fiscal Control Boards

Princeton University, Princeton, NJ 2006
B.S.E., Civil Engineering with Architecture, summa cum laude

EXPERIENCE

Community Innovators Lab, MIT, Cambridge, MA 2011-current
Project Manager, "Innovation and Equity Transform America:; Research Assistant
- Authored federal taxation memo, coordinated authors, and wrote abstracts for memos to the Presidential Transition Team.
- Drafted grant proposals and policy memos. Participated in designing a model for equitable and comprehensive green retrofits. Currently collaborating with local and national labor and community groups on implementation.

Department of Urban Studies and Planning, MIT, Cambridge, MA 2007-2011
Teaching Assistant
- Conducted seminars, graded essays, and contributed to curriculum design. Classes taught totaled over 200 students and comprised a doctoral research seminar, undergraduate policy course, and three masters planning courses. Conceived and taught graduate mini-seminar.

Brookings Institution, Washington, DC 2010-2011
Brookings Research Fellow
- Awarded first pre-doctoral fellowship for dissertation research granted by the Metropolitan Policy Program.
- Created a dataset compiled from government sources on municipal finances and socioeconomics. Programmed rare-events regressions to measure the impact of fiscal control boards in small cities. Performed qualitative case studies on the control boards of Miami and Washington, DC through interviews with key actors, archival research, and evaluating financial reports.
- Presented at two national academic conferences for Political Science (7,200 attendees) and Planning (1,000 attendees)

P3 Planning Practice Project, MIT, Cambridge, MA 2009-2010
Research Assistant
- Researched four medium-size cities and their innovative community planning organization. Profiled planners of small cities using national survey data. Created and maintained the project website.

Urban Institute, Urban-Brookings Tax Policy Center, Washington, DC 2007-2009
Research Associate II; Research Assistant
- Analyzed tax policy using statistical programs (SAS and Stata), with a focus on the distributional impact of national legislation, the interaction of tax policies and valuation of fringe benefits, and state code relevant to low-income residents.
- Designed, launched, and maintained the Tax Policy Center website for press, policymakers, and researchers. Website received over 12,500 hits per day and was praised by Forbes, National Journal, and Business Week.

New York City Nonprofits Project, New York, NY 2005-2006
Research Assistant
- Developed a strategy to determine the economic impact of the non-profit sector on the city.

Professor Julian Wolpert, Princeton University, Princeton, NJ 2005
Research Assistant
- Wrote a memo detailing the spillover effects of non-profits and value of non-profit tax exemption, focused on Philadelphia.

FELLOWSHIPS AND AWARDS

National Science Foundation Graduate Research Fellow, 3 years (2009-2012); MIT Presidential Graduate Fellow and Department Fellowship, 3 years (2009-2012); civil and Environmental Engineering Book Award and David W. Carmichael Prize, Princeton (2006).

PROFESSIONAL AND PUBLIC SERVICE

Student representative, PhD Committee, Department of Urban Studies and Planning, MIT (2009-2011); Graduate Resident Tutor, MIT (2010-2011); High school tutor, Maya Angelou Public Charter School, Washington, DC (2010-2011); Tax preparer for low income households, Community Tax Aid (2008) and Lincoln Park Baptist Church (2008); Washington, DC.

PUBLICATIONS AND CONFERENCES

2 first author; 10 co-author; 2 conference presentations; 1 first author manuscript under review (refereed).

Mechanical Engineer

1177 Mass Ave. • Cambridge, MA 02139 • Phone: 617-111-2222 • Email: mecheng.edu

SUMMARY

Extensive experience with applying analytical and numerical methods (such as the finite element method) to model a broad range of systems from molecular structures to large-scale mechanical structures. Proven track record of creating and improving new computational methods to perform dynamic and static analysis of otherwise intractable engineering and biological systems. Strong ability to collaborate and work in a team environment on multi-disciplinary projects. Legally authorized to work in the United States (Green Card holder).

EDUCATION

Massachusetts Institute of Technology (MIT), Cambridge, MA, USA 2011
Ph.D., Department of Mechanical Engineering.
- Thesis: "Contributions to the analysis of proteins" under the supervision of Prof. Jones and Prof. Smith
- GPA: 5.0/5.0 (Awarded an A+ grade for all courses. Only one or two people in each course get A+.)

Sharif University of Technology, Tehran, IRAN 2005
M.Sc., Department of Mechanical Engineering.
- Thesis: "Online control of needle injection into soft tissue using the finite element method"
- GPA: 18.62/20.0 (Ranked in top 5%)

University of Tehran, Tehran, IRAN 2003
B.Sc., Department of Mechanical Engineering.
- GPA: 17.68/20.0 (Class Rank: 2)

SKILLS

- **Computer:** Commercial finite element software programs: ADINA (founded and owned by my Ph.D. and postdoctoral advisor, Prof. KJ Bathe), ABAQUS, ANSYS; MeshLab (a mesh processing program); MATLAB; Fortran; AutoCAD; molecular viewers: PyMOL, VMD, UCSF Chimera; CHARMM (a molecular dynamics program); Adobe Illustrator.
- **Analytical:** Finite element method; optimization; stochastic simulation: Langevin and Brownian dynamics simulation; statistical analysis; multi-scale modeling; atomistic modeling; continuum modeling; bioinformatics; biomechanics; computational biology; molecular biology; biophysics; solid mechanics; fluid mechanics; controls.
- **Language:** English (fluent); Persian (native); Arabic (basic).

EXPERIENCE

Department of Mechanical Engineering, MIT, Cambridge, MA, USA Oct. 2011–current
Postdoctoral Associate
- Led project team that developed a coarse-grained finite element framework for the Brownian dynamics of macromolecular proteins that are inaccessible to available molecular dynamics algorithms.
- Created a model to calculate the diffusion coefficients and Brownian dynamics of DNA origami structures as part of a project in collaboration with researchers from MIT, Harvard, University of Michigan, Arizona State University, and Max Planck Institute. No other models are currently available.
- Member of team that developed a coarse-grained three-dimensional hydrodynamic model of semi-flexible filaments that resulted in several orders-of-magnitude reduction in computational cost.
- Collaborated with other engineers to improve a well-known implicit time-integration scheme that is widely used in engineering problems and in numerous commercial software tools. The improved version of the scheme has already been implemented in ADINA.

Department of Mechanical Engineering, MIT, Cambridge, MA, USA Jan. 2007–Jun. 2011
Research Assistant
- Improved a widely used eigenvalue solver to substantially reduce the computational cost of calculating the eigen-solutions of large-scale engineering and bioengineering systems. The improved version of the eigenvalue solver is currently used in ADINA.
- Made novel discoveries into the shape and function of complex proteins, the results of which have been included in comprehensive government and research databases (such as the Protein Data Bank) and utilized by leading research companies.
- Developed a coarse-grained finite element framework for the diffusion coefficients of proteins.

Department of Mechanical Engineering, MIT, Cambridge, MA, USA Fall 2007, Fall 2008, Fall 2010
Teaching Assistant, "Finite Element Analysis of Solids and Fluids I" & "Mechanics and Materials I"
- Prepared and presented lectures and recitations, supported term projects, helped students with course materials, and graded homework and

Department of Mechanical and Aerospace Engineering, Ohio State University, Columbus, OH, USA Fall 2006
Teaching Assistant, "Thermodynamics I"

- Contributed to designing experiments for a new thermodynamics laboratory.

ITCEN Co. (Industrial & Technical Consulting Engineers Company), Tehran, IRAN Mar. 2006–Sept. 2006
Senior Engineer

- Designed the layout of production lines for a pipe manufacturer.

Department of Mechanical Engineering, Sharif University of Technology, Tehran, IRAN Sept. 2003–Dec. 2005
Research Assistant

- Performed compression tests on bovine liver and characterized its material properties using the genetic algorithm and the finite element method. Developed an algorithm to obtain the optimal path initiation for the needle insertion into bovine liver for biopsy and brachytherapy purposes.

SAPCO Co. (Supplying Automotive Parts Company), Tehran, IRAN Summer 2001; Summer 2002
Intern

- Analyzed newly designed and produced automotive parts using mechanical tests such as Engine Test, Material Strength Test, etc.

HONORS AND AWARDS

MIT Outstanding Graduate Student Institute Award (2010). This award was given to the top two graduate students at the Department of Mechanical Engineering at MIT. The department has more than 500 graduate students; **NSF Fellowship for the GEM4-2010 program** (2010); **Highly Distinguished Student of University of Tehran** (1999–2003): A student who is in top 0.05% (out of ~500,000 applicants) in the nation-wide university entrance exam and his/her semester GPAs are above 17 out of 20.

JOURNAL PUBLICATIONS

Mech Eng *et al.,* "Three-dimensional implicit hydrodynamic model of semi-flexible filaments", *in preparation*.

Mech Eng *et al.,* "Diffusion coefficients of DNA origami structures", *in preparation*.

Mech Eng *et al.,* "Brownian dynamics simulation of DNA origami structures", *in preparation*.

Mech Eng *et al.,* "A finite element framework for Brownian dynamics simulation of proteins", *in preparation*.

Mech Eng, A. A. Fedorov, E. V. Fedorov, S. Ono, F. Matsumura, S. C. Almo, & M. Bathe, "Structure, evolutionary conservation, and conformational dynamics of Homo sapiens fascin-1, an F-actin crosslinking protein", *Journal of Molecular Biology*, 400 (2010), pp. 589-604.

Mech Eng, M. T. Ahmadian, & F. Janabi-Sharifi, "Modeling, simulation, and optimal initiation planning for needle insertion into the liver", *Journal of Biomechanical Engineering-Transactions of the ASME*, 132 (2010), p. 041001 (11 pages).

Mech Eng, M. Bathe, & K. J. Bathe, "The subspace iteration method in protein normal mode analysis", *Journal of Computational Chemistry,* 31 (2010), pp. 66-74.

M. T. Ahmadian, **Mech Eng,** & R. Abdollahpour, "A nonlinear viscoelastic modeling of brain and CSF deformation under tumor expansion", *International Journal of Scientific Research*, 16 (2006), pp. 425-428.

M. T. Ahmadian, **Mech Eng** R. Abdollahpour, S. Sharifi Sedeh, & K. Navi, "Application of car active suspension in vertical acceleration reduction of vehicle due to road excitation and its effect on human health", *International Journal of Scientific Research*, 16 (2006), pp. 429-434.

M. T. Ahmadian, R. Abdollahpour, & **Mech Eng**, "Effect of tumor location and its growth on stress distribution in the brain", *International Journal of Scientific Research,* 16 (2006), pp. 523-527.

OTHER PUBLICATIONS

3 first-author journal abstracts; 14 conference papers.

ACTIVITIES

- Sports: Soccer; table tennis; swimming; hiking; mountain climbing.
- Music: Singing.

PhD Resume Sample

Ph.D. Interested in Consulting

Rm. E39-305, M.I.T., 77 Mass Ave. • Cambridge, MA 02139 • Phone: 617-XXX-XXXX • Email: imastudent@mit.edu

Education

MASSACHUSETTS INSTITUTE OF TECHNOLOGY **Cambridge, MA**
Candidate for Ph.D. degree in Material Science & Engineering, June 2014 Used stochastic simulation techniques to gain new insights into polymer structure. Established collaboration with experimental group in the Mechanical Engineering Dept. Pursuing unique integrated approach to develop new molecular models better suited to designing optimal industrial processes. *GPA: 4.9/5.0*
Minor: **Business Administration at the Sloan School of Management, MIT**
Business Courses: Management of Innovation and Technology, International Management, Entrepreneurship, Microeconomics, Macroeconomics, Management and Policy in the International Economy, Marketing, Finance Theory, Options and Derivatives, Investment Banking, Operations Research.
Master of Science in Chemical Engineering Practice, January 2009.

TRINITY COLLEGE, CAMBRIDGE UNIVERSITY **United Kingdom**
Master of Engineering, June 2006 Class Rank: 2
Bachelor of Arts with Honors in Natural Science and Chemical Engineering, June 2005 Class Rank: 1

Experience

INDUSTRY INTERNSHIPS
MERCK PHARMACEUTICALS (Summer 2008) **West Point, PA**
Team Leader: Found systematic method to raise glass transition temperature of vaccines. This allowed a higher storage temperature for the vaccines. Generated $5million annual saving in refrigeration costs.

DOW CHEMICALS (Summer 2007) **Plaquemine, LO**
Intern: Wrote software for simulating complex distillation processes, adopted throughout Dow Chemicals.

DOW-CORNING (September-November 2007) **Midland, MI**
Team Leader: Removed a bottleneck to allowing doubling of a plant's capacity. $10million capital savings.

UNITED KINGDOM ATOMIC ENERGY AUTHORITY (Summers, 2001-2005) **United Kingdom**
Intern:Worked for fluid mechanics groups on technical consulting projects for the petroleum industry. Frequently delivered presentations to clients. Incorporated new algorithms into pipeline simulation modules and achieved tenfold increase in speed. Developed strategies to reduce pipeline erosion. Improved reliability of flowrate measurement devices in oil pipelines to allow clients to better monitor throughputs.

Leadership

MIT PRESIDENT, STUDENT LEADERSHIP COUNCIL OF MATERIAL SCIENTISTS (2011 - present)
Leader in group of 200 students that promotes collaboration between five major research universities. Organized videoconferences to allow students to share research ideas. Planning summer retreat to further student collaboration. Investigating ways to promote science and technology in secondary schools and the community.

STUDENT REPRESENTATIVE, MIT MATERIAL SCIENCE & ENGINEERING DEPT. STUDENT AFFAIRS COMMITTEE (2011 - present)
Leading student / faculty discussion on ways to enhance student / advisor interaction.

TEACHING ASSISTANT, MIT MATERIAL SCIENCE & ENGINEERING DEPT. (Fall semester 2010)
Organized tutorials to clarify course material. Wrote instruction manual to help students use math software. Class scored 7% higher in final than any of the professor's former classes.

U.K. COORDINATOR, EUROPEAN CLUB CAREER FAIR (2006)

Awards, Honors

Winner of National Science Foundation Poster Competition (1012); **Sigma Xi Engineering Research Honors Society** (2010); **Harvey Stern Fellowship**, MIT (2009); **Fox Prize** for Outstanding Performance in Chemical Engineering, Cambridge University (2006); Verhaydn de Lancy Prize for Outstanding Contribution to Trinity College (2005); **Mobil Prize** for Best Performance in Chemical Engineering, Cambridge University (2005); **Senior Scholarship** for Outstanding Academic Performance, Trinity College, Cambridge (2004); **Student Scholarship,** United Kingdom Atomic Energy Authority (2002-2006)

Activities

Dancing (MIT Salsa Club), Classical Guitar, MIT Debating Club, MIT European Club Soccer Team

Alum Resume Sample

A.N. ALUM

123 Infinity Avenue, Cambridge, MA 02139, analum@alum.mit.edu, 617-XXX-XXXX

SUMMARY

Accomplished strategy and finance professional with extensive experience in health care, financial services, energy, and education. Proven track record of improving client and firm performance across a broad range of corporate, not-for-proft, and government organizations. Strong ability to manage senior-level relationships and cross-functional teams.

EXPERIENCE

MIT MEDIA LAB, Cambridge, MA, 2012-Present
- Co-led development of virtual rehabilitation interface integrating clinical and home-based physical therapy.
- Interviewed clinicians to determine key specifications required for effective treatment in home and clinical settings.
- Collaborated on proposal that won $100,000 innovation grant to further develop technology.

XYZ PUBLIC CHARTER SCHOOLS, Washington, DC, 2011
- Led development and initial launch of performance management system to improve operational and academic excellence of network of ten schools with over 5,000 students, 500 staff, and $70 million operating budget.

GLOBAL INVESTMENT FIRM, New York, NY and San Francisco, CA, 2009-2011
Senior Associate, Global Analytics
- Managed financial analysis and due diligence for over $2 billion in private equity financing for investment acquisition targets in transportation, energy, clean technology, and real estate sectors. Negotiated and oversaw contracts and relationships with engineering, real estate, accounting, and investment banking advisory firms.
- Evaluated strategic market opportunities in clean technology sector, including potential investments in wind turbine technology and carbon markets. Firm subsequently invested in several carbon reduction projects.
- Delivered presentations on strategic analysis, financial valuation, and due diligence of potential investments to Board members and senior executives of Babcock & Brown, portfolio companies, and prospective investment targets.
- Streamlined investment review process firmwide, resulting in improved financial and risk analysis.

AN INVESTMENT BANK, New York, NY, 2002-2006
U.S. Economist, Associate Director
- Collaborated with retail and institutional investor sales force to increase distribution of U.S. economics research products that reached hundreds of thousands of clients. Advised large institutional investor clients on U.S. economics forecasts and research products and conducted customized client research.
- Managed launch of new research products from concept to distribution across sales channels. Led writing, production, and distribution of 200-page Data Decoder reference book, successfully positioned as flagship UBS research product
- Spearheaded integration of people, processes, and systems between PaineWebber U.S. Economics Team and UBS Global Economics Team following merger. Completed full integration six months prior to all other Research Teams and advised senior management on integration of remaining 150 PaineWebber Analysts.

WORLD BANK, Washington, DC, 2002-2003
Research Analyst, Development Economics Research Group
- Evaluated capital structure and corporate governance of 4,000 firms in Indonesia, Korea, Malaysia, Philippines, and Thailand before and after 1997 financial crisis to inform policy response.
- Prepared reports and presentations of survey findings for senior government officials, global business leaders, senior World Bank officials, and international press. Organized conference in Bangkok for key Asian cabinet ministers and World Bank officials to discuss findings.
- Designed and evaluated randomized trials of education programs across 300 schools in Kenya. Led 10-person team in overhaul of data management process to improve accuracy and analysis of 20,000 student records.

EDUCATION

UNIVERSITY OF PENNSYLVANIA, Philadelphia, PA
The Wharton School, *Master of Business Administration, Major in Finance*. August 2008.
Graduate School of Education, *Master of Science in Education, Major in Educational Leadership*. May 2007
- Extensive experience in strategic planning and business development for organizations including Mastery Charter Schools, Victory Schools, School District of Philadelphia, and Association for Sustainable Economic Development.

MASSACHUSETTS INSTITUTE OF TECHNOLOGY, Cambridge, MA
Bachelor of Science, Major in Economics. June 2000. GPA: 4.5/5.0

ADDITIONAL INFORMATION
- **Computer skills:** Competency in Excel financial modeling, Powerpoint, Access, SQL, SAS, Windows, and Mac OS.
- **Languages:** Written and spoken fluency in Spanish. Conversant in Mandarin Chinese.
- **International experience:** Worked in Chile, Peru, Mexico, Thailand, and Kenya. Studies for one year in Chile.

CV Guidelines

A curriculum vitae (CV) is a summary of your experiences and educational background. While it can resemble a resume, a CV is most often used when applying for a teaching or research opportunities, applying for a grant or fellowship, or for further academic training. The process will be similar to the process of writing a resume, however, CVs are frequently longer and include much more detailed information.

Include the following relevant information in your CV:

- ***Identifying Information***: Name, address, phone, and email.
- ***Education***: In reverse chronological order, list your expected degree, previously earned degrees, majors, institutions, and dates of completion.
- ***Dissertation***: Put the title and short description of your thesis.
- ***Areas of Research Interest, Specialization, or Competence***: Here you will want to include any expertise or principal research and teaching interests.
- ***Experience***: This is often divided into categories such as research experience, teaching experience, industry experience, and professional experience.
- ***Fellowships, Awards, Honors***: Include date awarded and monetary amount if appropriate
- ***Memberships or Professional Affiliations***: List all positions held or memberships.
- ***Languages***: List languages where you are proficient, fluent, or have basic skills.
- ***Publications and Presentations***: Provide a full list of your authored publications and presentations.
- ***Others***: This might include works in progress, references, or dissertation abstract.

Remember to tailor your CV to the position!

Differences Between a CV and Resume

Category	Curriculum Vitae	Resume
What is it?	A full list of your professional and educational history.	A selection of your experience and skills that are most pertinent to the advertised position.
How long is it?	May be many pages; length is not important.	Usually one page only for entry-level positions. Multiple pages may be appropriate for more advanced or research-oriented positions.
When do you use it?	Used for academic positions and research positions in government and industry.	Used for every other type of job outside of academia and research science.
Do you include your publications?	A full list of publications is essential.	Even a partial list of publications is rarely included.
How important is style and layout?	Content is what matters most. As long as material is clearly presented, style doesn't matter that much.	Style and content are both important. Bad style is a liability.
Are references listed?	Typically references are listed at the end of the CV.	References are not listed on a resume. If requested, you may submit a separate list of relevant references.

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Sample CV #1

Claudio V Di Leo

Business Address
Massachusetts Institute of Technology
77 Massachusetts Av. Rm. E39-305
Cambridge, MA 02139
617-555-5555

Home Address
1234 Main Street Apt. 007
Cambridge, MA 02139
617-555-5555
phd@mit.edu

Education

Massachusetts Institute of Technology Cambridge, MA
Ph.D in Mechanical Engineering. GPA 4.9/5.0 *Expected, June 2015*
- Provisional thesis title: Chemo-mechanics of energy storage materials: focus on Li-ion battery electrodes. Advisor: Lallit Anand.
- Minor in micro and nano scale material science.

Massachusetts Institute of Technology Cambridge, MA
M.S. in Mechanical Engineering. GPA 4.9/5.0 *June 2012*
- Thesis title: A coupled theory for diffusion of hydrogen and large elastic-plastic deformations of metals. Advisor: Lallit Anand.

Massachusetts Institute of Technology Cambridge, MA
B.S. in Mechanical Engineering. GPA 4.8/5.0 *February 2010*
- Participated in four semesters of undergraduate research under the guidance of Prof. Lallit Anand resulting in an undergraduate thesis and a joint conference publication in the ASME IMECE 2010 proceedings.
- Thesis title: Nitinol-reinforced shape-memory polymers.

Research Experience

MIT Mechanical Engineering Cambridge, MA
Advisor: Lallit Anand

My research focuses on modeling the coupled multi-physics (deformation-diffusion) behavior of energy storage materials. My work combines rigorous thermodynamically-consistent constitutive frameworks with robust numerical implementations.

- Currently developing a coupled deformation-diffusion model for Silicon anodes. Thus far, the model has been calibrated to substrate curvature experiments and is capable of reproducing both the mechanical response as well as the electrochemical response of the experiments. Using this model I am studying the effect of deformation and plasticity on the electrochemical performance of various nano-dimensioned Silicon anodes which have been experimentally realized.
- Developed and numerically implemented a continuum level model which couples Cahn-Hilliard type diffusion with large elastic deformations to model the phase-separating behavior of Lithium when it intercalates in certain cathodes. We have shown through simulations of representative spheroidal particles that the lithiation morphology, as well the rate at which the battery can be charged, is highly dependent on the stress built-up in the particle.
- Developed a theory and numerical implementation for modeling hydrogen diffusion in metals undergoing large elastic-plastic deformations. The model was used to study hydrogen diffusion at a blunt-crack, and determine the appropriate boundary conditions for modeling the physical problem of a metal host exposed to gaseous hydrogen.

Research Interest

My broad research interests are:
- Coupled multi-physics problems
- Computational mechanics
- Energy storage materials and the role of mechanics in their performance
- Modeling of electrochemical phenomena (i.e. Li-intercalation, chemical reactions, etc.) at the continuum scale

Awards

Graduate Student Paper Award for the presentation "Coupled diffusion-deformation of phase-separating materials" bestowed by ASME and SES at the joint SES annual technical meeting and ASME-AMD annual summer meeting, July 2013.

Den Hartog Travel award in Mechanics awarded for travel to present at the ASME IMECE 2013 conference.

2011 Wunsch Foundation Silent Hoist and Crane Award — Outstanding Teaching Assistant for the class Mechanics and Materials II.

2008 AMP Inc. Award for outstanding performance in Mechanics and Materials II.

Teaching Experience

Teaching & Learning Laboratory at MIT *Spring 2014*
Teaching Certificate Program
- Completed a teaching certificate program based on seven workshops aimed at development of teaching skills. The program included exposure to relevant research in teaching and learning, and structuring of future teaching.
- Presented two short teaching sessions which were videotaped, and from which I received feedback on my teaching performance as well as gave feedback to other participants.

Undergraduate Mechanics and Materials
Teaching assistant *Spring 2011*
- Teaching assistant for the undergraduate Mechanics and Materials class. Topics included strain, stress, elasticity, fracture, fatigue, plasticity, and viscoelasticity.
- Prepared homework and exam problems/solutions, gave review lectures, and facilitated student laboratory experiments.
- Developed a student project based on material selection in bicycle design. The project combined direct experimentation on bicycle forks tested in an Instron machine, finite-element modeling performed in Solidworks, and analytical beam bending solutions to explore material selection and design.
- Overall rating 6.4/7.0.

Graduate Mechanics and Materials *Spring 2010 &*
Teaching assistant *Spring 2013*
- Teaching assistant for the graduate Mechanics Materials class. Topics included kinematics, stress, and balance principles. Linear elasticity and thermal elasticity. Viscoelasticity. Small-strain elastic-plastic deformation. Introduction to large deformations and nonlinear hyperelastic material behavior.
- Taught a weekly one hour recitation which reviewed lecture material and solved example problems. Prepared homework and exam problems/solutions.
- Overall rating 6.1/7.0.

Advising Experience

MIT Mechanical Engineering *September 2014 to Present*

- Currently advising an undergraduate student as part of a research program for undergraduates at MIT and as part of her thesis work. The research focuses on the experimental characterization of the deformation-diffusion behavior of swellable elastomers.

Industry Experience

Apple Inc. Cupertino, CA
Interning Product Design Engineer *June to August 2009*

- Interned at Apple's iPhone/iPod accessories product design team. Work involved mechanical design, CAD modeling, prototyping, reliability testing, and competitor benchmarking.
- Two issued patents: "Accessory Controller for Electronic Devices" (US 8.314.354 B2). "Compact media player" (US 8.724.339 B2).

Qualcomm MEMS Technologies San Jose, CA
Interning Engineer *June to August 2008*

- Characterized the mechanical behavior of Qualcomm's MEMS display technology.
- Performed extensive MATLAB programming to develop a graphical user interface for retrieving the optical response of a finite-element simulated pixel.

Publications (Accepted)

Chester, S.A., **Di Leo, C.V.**, and Anand, L. (2014). A finite element implementation of a coupled diffusion-deformation theory for elastomeric gels. *International Journal of Solids and Structures*, 52, 1-18.

Di Leo, C.V., Rejovitzky, E., and Anand, L. (2014). A Cahn-Hilliard-type phase-field theory for species diffusion coupled with large elastic deformations: application to phase-separating Li-ion electrode materials. *Journal of the Mechanics and Physics of Solids*, 70, 129.

Di Leo, C.V., Luk-Cyr, J., Liu, H., Loeffel, K., Al-Athel, K., and Anand, L. (2014). A new methodology for characterizing traction-separation relations for interfacial delamination of thermal barrier coatings. *Acta Materialia*, 71, 306-318.

Di Leo, C.V., and Anand, L. (2013). Hydrogen in metals: A coupled theory for species diffusion and large elastic-plastic deformations. *International Journal of Plasticity*, 43, 42-69.

Bhattacharyya, R., **Di Leo, C.V.**, Floerkemeier, C., Sarma, S., and Anand, L. (2010, November). RFID tag antenna based temperature sensing using shape memory polymer actuation. In Sensors, *2010 IEEE*, 2363-2368.

Chester, S.A., Srivastava, V., **Di Leo, C.V.**, and Anand, L. (2010, January). A large-deformation theory for thermally-actuated shape-memory polymers and its application. In *ASME 2010 IMECE*, 677-683.

(Submitted)

Di Leo, C.V., Rejovitzky, E., and Anand, L. Diffusion-deformation theory for amorphous silicon anodes: the role of plastic deformation on electrochemical performance. *Electrochimica Acta*, Submitted.

Rejovitzky, E., **Di Leo, C.V.**, and Anand, L. (2014). A theory and a simulation capability for the growth of a solid electrolyte interphase layer at an anode particle in a Li-ion battery. *Journal of the Mechanics and Physics of Solids*, Submitted.

(In Preparation)

Di Leo, C.V., and Anand, L. Split methods for solving the Cahn-Hilliard equation using finite element analysis. Application to phase-separation in elastic media.

Invited Talks

Di Leo, C.V. (November, 2014). Computational modeling of Silicon anodes: the role of mechanics on the electrochemical performance. *Mechanical and Industrial Engineering Department, New Jersey Institute of Technology.*

Conferences (Lead Author)

Di Leo, C.V., Rejovitzky, E., and Anand, L. (June, 2014). Coupled diffusion-deformations in phase-separating materials. *US National Congress of Theoretical and Applied Mechanics*, East Lansing, MI.

Di Leo, C.V., Rejovitzky, E., and Anand, L. (November, 2013). A Cahn-Hillard-type phase-field theory for species diffusion coupled with large elastic deformations. *ASME International Mechanical Engineering Congress and Exposition*, San Diego, CA.

Di Leo, C.V., Rejovitzky, E., and Anand, L. (July, 2013). Coupled diffusion-deformation of phase-separating materials. *SES Annual Technical Meeting and ASME-AMD Annual Summer Meeting*, Providence, RI

Di Leo, C.V., and Anand, L. (November, 2012). Hydrogen in metals: A coupled theory for diffusion and large elastic-plastic deformations. *ASME International Mechanical Engineering Congress and Exposition*, Houston, TX.

(Contributing Author)

Chester, S.A., **Di Leo, C.V.**, and Anand, L. (November, 2011). A thermo-chemo-mechanically coupled theory for thermally-responsive elastomeric gels. *ASME International Mechanical Engineering Congress and Exposition*, Denver, CO.

Chester, S.A., Srivastava, V., **Di Leo, C.V.**, and Anand, L. (January, 2010). A large-deformation theory for thermally-actuated shape-memory polymers and its application. *ASME International Mechanical Engineering Congress and Exposition*, Vancouver, BC Canada.

Patents

Prest, C.D., and **Di Leo, C.V.** (2014). "Compact media player." U.S. Patent No. 8,724,339.
Prest, C.D., **Di Leo, C.V.**, and Minoo, J. (2012). "Accessory controller for electronic devices." U.S. Patent No. 8,314,354.

Skills

Language: Fluent in Spanish, Portuguese, German and English
Computer: Fortran, Abaqus (including UMAT and UEL), MATLAB, Solidworks, NX, Mastercam Lathe and Mill.

References

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Sample CV #2

EAPS POSTDOC

MASSACHUSETTS INSTITUTE OF TECHNOLOGY
EARTH, ATMOSPHERIC AND PLANETARY SCIENCES DEPARTMENT
77 Massachusetts Ave. Cambridge MA 02139
617-234-5678 (office) EAPSPhD@mit.edu

EDUCATION

MIT & Woods Hole Oceanographic Institution, Ph.D. Geochemistry 2010
University of Leeds, U.K., M.Sc. Geochemistry 2004
Bangor University, U.K., B.Sc. Geological Oceanography 2002

ACADEMIC EXPERIENCE

Dept. of Earth, Atmospheric and Planetary Sciences (EAPS) Postdoctoral Associate Since 9/2013

- Experimental investigation of the rates and mechanisms of secondary oil-to-gas cracking to develop and validate ab initio quantum kinetic models for this process under geologic conditions
- Experimental investigations of oil-to-gas decomposition, working in close collaboration with theoretical chemistry modelers in the MIT Chemical Engineering Dept. • Long Term Guest Investigator (WHOI)
- Advisors: S. Fish (EAPS) and W.H. Blue (ChemE)

Guest Investigator (Long Term), Woods Hole Oceanographic Institution, MA Since 9/2013

MARUM Center for Marine Environmental Sciences & Department of Geosciences 2010-2013
Univ. of Bremen, Germany Postdoctoral Fellow

- Lead investigator in sampling and analyses of seafloor hydrothermal fluids in the Mid-Atlantic Ridge and Manus Basin, and in novel organic geochemical investigations of associated hydrothermal sulfide structures. Advisors: ABC and XYZ
- Led projects and field teams sampling and analyzing seafloor geothermal fluids and solids on two international sea-going expeditions, using state of the art submersible and fluid sampling technology
- Led a multidisciplinary team investigating biomarkers in hydrothermal structures, including study publication

MIT/WHOI Joint Program in Chemical Oceanography 2005-2010
RESEARCH ASSISTANT, Dept. of Marine Chemistry and Geochemistry

- Developed methods for and analyzed dissolved organic and inorganic gases, including trace species
- Experimentally investigated abundances and isotope compositions of trace organics in geothermal fluids
- Collaborated with interdisciplinary scientist to conduct thermodynamic modeling of dissolved gases in experimental and field samples
- Teaching assistant for MIT graduate course Aquatic Chemistry
- Thesis: Laboratory and Field-based Investigations of Subsurface Geochemical Processes in Seafloor Hydrothermal Systems
- Combined thermodynamics, trace organic analyses, and high temperature experiments to constrain organic geochemical processes in submarine hot springs
- Thesis Advisor: Canu Seaweed. Cumulative GPA: 5.0/5.0

Guest Student, Woods Hole Oceanographic Institution, MA 08/2003

TEACHING EXPERIENCE

- Jacobs (International) University Bremen, 2012. Lecturer for senior B.Sc. course 'Geochemistry of Aqueous Systems' with Prof. A. Developed and taught lectures, problem sets, exam questions.

- University of Bremen, 2011. Guest lecturer for 'Petrology of the Ocean Crust' M.Sc. course with Prof. B. Developed and taught lectures, exam questions. Class size 75 and held office hours every Monday.

GRADUATE & UNDERGRADUATE RESEARCH MENTORING

- University of Bremen, 2012. Developed, supervised M.Sc. thesis of N. G. (coauthor on Environ. Microbiol Manuscript). A conference abstract is published, additional manuscript is in prep.

- University of Bremen, 2011. Mentored Bridgewater State College undergraduate and WHOI guest student (currently graduate student at the Dept. of Earth Sciences, U.Minn.) in hydrothermal fluid analysis during his participation in expedition SO-216 (Manus Basin) as my research assistant

PEER-REVIEWED PUBLICATIONS

EAPS Postdoc., M. Y†, P. P†, N. G§, J.P., A.M., R. A, W. B, K., Microbial lipids reveal diverse carbon flow patterns on hydrothermal sulfide structures. In press, Environmental Microbiology. († equal contribution, § mentored M.Sc. student)

EAPS Postdoc, J.M. Mc. and C Seaweed **(2014)** The origin of methanethiol in mid-ocean ridge hydrothermal fluids. Proc. Natl. Acad. Sci. USA. 111(15), pp5474–5479.)

LG, S.Q., Blue, G.L., D.S., M.D., and **EAPS Postdoc (2012)** Online Letter: H2/CH4 ratios cannot reliably distinguish abiotic vs. biotic methane in natural hydrothermal systems. Proc. Natl. Acad. Sci. USA 109(47), E3210.

N.J., **EAPS Postdoc.**, M.E., DK., Seaweed, J.S., W.E. Jr. **(2012)** Subseafloor phase equilibria in high-temperature hydrothermal fluids of the Lucky Strike Seamount (Mid-Atlantic Ridge, 37°17'N). Geochim. Cosmochim. Acta 90, pp303–322.

EAPS Postdoc, Seaweed, J.S, **(2012)** Hydrogen isotope exchange between n-alkanes and water under hydrothermal conditions. Geochim. Cosmochim. Acta 77, pp582–599.

EAPS Postdoc, Seaweed, J. S., P.B., W. P. R., W. C., S. P., E., and R., M. **(2011)** Geochemistry of hydrothermal fluids from the PACMANUS, Northeast Pual and Vienna Woods hydrothermal fields, Manus Basin, Papua New Guinea. Geochim. Cosmochim. Acta 75, pp1088–1123.

M. J., Seaweed, J. S., C. G., M. K., P. J., G., T. M., **EAPS Postdoc**, C. F., L. H. T. **(2011)** Chemistry of hot springs along the Eastern Lau Spreading Center. Geochim. Cosmochim. Acta 75, pp1013–1038.

R. J., **EAPS Postdoc**, K.N., P. B., S. H., and J. G. **(2011)** Low marine sulfate concentrations and the isolation of the European epicontinental sea during the Early Jurassic. Geol. 39, pp7–10.

P. R., Seaweed J. S., O. J., **EAPS Postdoc**, and, M. K. **(2010)** Rare earth element abundances in hydrothermal fluids from the Manus Basin, Papua New Guinea: Indicators of sub-seafloor hydrothermal processes in back-arc basins. Geochim. Cosmochim. Acta 74, pp5494–5513.

Widall, P. B., Hall, A., New, J. G., **EAPS Postdoc**, Matt, E., and Crow, S. **(2006)** An eastern Tethyan (Tibetan) record of the Early Jurassic (Toarcian) mass extinction event. Geobiology 4, pp179–190.

Manuscripts in review:
‡ Seaweed, J.S., **EAPS Postdoc**, W. P., P.C., W.C., S.T., M. E., Submarine venting of magmatic volatiles in the Eastern Manus Basin, Papua New Guinea.
In revision, Geochim. Cosmochim. Acta.

C. M., R.M., **EAPS Postdoc**, A. T. Arsenic in fluids and biota of the Menez Gwen hydrothermal system. In review, Deep-Sea Research Pt.I.

SELECTED CONFERENCE PRESENTATIONS (PUBLISHED ABSTRACTS, ‡ attached)

‡ G. N.§, M.Y., **EAPS Postdoc**, P. W., K.U. **(2013)** Microbial lipid remnants in hydrothermal structure interiors: Evidence for transport from subseafloor environments. Organic Geochemistry: Trends for the 21st Century, 1, B106 (abstract). 26th International Meeting on Organic Geochemistry (IMOG) 2013, Tenerife. (§ mentored M.Sc. student, manuscript in prep.)

‡ **EAPS Postdoc**, X. M., M. J., Seaweed, K.U., and W.B. **(2011)** Phase separation, degassing and anomalous methane at the Menez Gwen hydrothermal field. Mineralogical Magazine, 75(3), p1702 (abstract). 21st Annual V.M. Goldschmidt Conference, Prague.

Seaweed , J. S., Bach, W., **EAPS Postdoc (2010)** Fluid-mineral equilibria in subseafloor reaction zones beneath Eastern Manus vent fields. Geochim. Cosmochim. Acta, 74(12, Suppl. 1), pp A930 (abstract). 20th Annual V.M. Goldschmidt Conference, Knoxville, TN.

S. W.C., One, S., Seaweed, J., **EAPS Postdoc**, Titey, M., Braddock, P. **(2010)** Stable isotope studies of Manus basin hydrothermal vent fluids and deposits. Geochim. Cosmochim. Acta., 74(12, Suppl. 1), pp A940 (abstract). 20th Annual V.M. Goldschmidt Conference, Knoxville, TN.

EAPS Postdoc and J. Seaweed **(2009)** INVITED: Methanethiol: A geochemical link between carbon and sulfur in hydrothermal systems? Geochimica et Cosmochimica Acta, 73(13, Suppl. 1), pp A1079 (abstract). 19th Annual V.M. Goldschmidt Conference, Davos, Switzerland.

Seaweed, J. and **EAPS Postdoc (2009)** INVITED: Chemical equilibria involving aqueous carbon compounds in submarine hydrothermal systems. Geochimica et Cosmochimica Acta, 73(13, Suppl. 1), pp A1190 (abstract). 19th Annual V.M. Goldschmidt Conference, Davos, Switzerland.

New, R.J., Kathy, N., **EAPS Postdoc**, Wind, P.B., Botte, S. **(2008)** The marine sulfate-oxygen isotope record of the early Toarcian anoxic event. Geochimica et Cosmochimica Acta, 72(12, Suppl. 1), pp A679 (abstract). 18th Annual V.M. Goldschmidt Conference, Vancouver, Canada.

EAPS Postdoc, J. Seaweed, S. Sylvester **(2007)** Rapid hydrogen isotopic exchange between aqueous hydrocarbons and water under hydrothermal conditions. Geochimica et Cosmochimica Acta, 71(15, Suppl. 1), pp A825 (abstract). 17th Annual V.M. Goldschmidt Conference, Cologne, Germany.

AWARDS & ACHIEVEMENTS

2012 'Top 25' most downloaded Geochimica et Cosmochimica Acta articles in 2011, Reeves et al.(2011) and Mottl et al.(2011). Link
2011 Interridge Postdoctoral Fellowship Award (research grant)
2010 WHOI Ruth and Paul Fye Award for Excellence in Oceanographic Research, Graduate Student Best Paper Award, awarded for: Reeves et al. (2011) Geochim. Cosmochim. Acta, 75, pp1088–1123.
2010 The Sherwood Chang/Eliot Kalmbach Award for Student Poster Presentation, 2010 Gordon Research Conference on the Origin of Life (Galveston, TX).
2007 WHOI Deep Ocean Exploration Institute Fellowship
2005 WHOI Graduate Research Assistantship
2003 University Of Leeds Full Fees Bursary for UK/EU Mastership postgraduates
2001 Darbyshire Prize Award, School of Ocean Sciences, University of Wales, Bangor
1999 Aughinish Alumina Ltd. (Ireland) Educational Award for University undergraduate education

FIELD EXPEDITIONS

2013 St Ocean Institute R/V Falk/HROV Nereus Return to Mid-Cayman Rise hydrothermal systems. Guest investigator. Hydrothermal plume sampling and analysis.
2012 U.S. R/V Atlantis/ROV Jason hydrothermal exploration and sampling of the Mid-Cayman Rise. Guest investigator. Hydrothermal fluid analysis.
2011 Germ F/S Son/ROV Quest 4000m return to Manus Basin hydrothermal systems. Lead investigator in Isobaric Gas-Tight (IGT) hydrothermal fluid sampling and analysis.
2010 Germ F/S Met/ROV Quest 4000m, Menez Gwen hydrothermal system, Mid-Atlantic Ridge. Lead investigator in IGT hydrothermal fluid sampling and analysis.
2008 U.S. R/V Atlantis/DSV Alvin Guaymas Basin & East Pacific Rise hydrothermal systems
2008 U.S. R/V Roger Revelle/ROV Jason II Mid-Atlantic Ridge hydrothermal systems.
2006 U.S. R/V Melville/ROV Jason/ABE Manus Basin hydrothermal exploration, sampling.
2005 U.S. R/V Melville/ROV Jason Lau Basin hydrothermal exploration, sampling.

REVIEWER ACTIVITIES

National Science Foundation (OCE), Geochimica et Cosmochimica Acta, Earth and Planetary Science Letters, Applied Geochemistry, Geochemical Transactions, Geochemical Journal, IEEE Journal of Oceanic Engineering

SYNERGISTIC ACTIVITIES

2013 Fall AGU Session Chair 'Carbon transformations in hydrothermal systems' (oral & poster), Outstanding Student Paper Award (OSPA) judge
2006–2009 WHOI Institution Safety Committee, graduate student representative
2007–2008 MIT/WHOI Joint Program student life representative
2000–2002 Bangor University School of Ocean Sciences student representative

ACADEMIC REFERENCES

Dr. Jeff S. Seaweed, Senior Scientist (Ph.D. advisor)
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Dr. Theme M. Collom, Research Associate (Thesis Committee member)
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University of Colorado, Boulder, CO 80309.
Phone: +1 333 777 7272. Email: collom@lasp.colorado.edu

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Prof. Dr. Kite Flys (Postdoctoral advisor)
Dean, Department of Geosciences, University of Bremen, Bremen, Germany
Phone: +49 494 94949494. Email: kflys@uni-bremen.de

TEACHING REFERENCE

Prof. Dr. Andre Koch
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Phone: +49 422 42242242. Email: a.koch@jacobs-university.de

Cover Letters

You will have to write a number of letters to employers while looking for a job. One type of letter is the cover letter, which you send with your resume when you are requesting a job interview. Other letters are those you write following up interviews, arranging company site visits, and accepting or rejecting job offers. See the examples on the next pages. Here are some tips:

- State clearly in your opening sentence the purpose for the letter. Then use the rest of the letter to support your candidacy.
- Be sure that each cover letter is specifically tailored to the company to which you are writing. Research the company to help you determine your approach. Check the company's website and other resources on the Internet.
- If you are seeking a position in a field or industry that does not have an obvious parallel or connection to your academic training, for example, you are an electrical engineer who wants to use his/her quantitative skills in a finance or consulting position—be explicit about why you are interested in that particular field, organization or job, and what value you bring. Do not leave the reader wondering, "Why is an electrical engineer writing to me, the personnel manager of McKinsey?"
- If you are applying for a summer job and do not yet have any experience that is directly related to the position, focus on telling the employer what experience you do have that may be of interest.
- Always try to write to a specific individual and include their job title. Do not address your letter to "Dear Sir or Madam."
- Ask someone else to check your grammar, spelling, and style. When proofreading your own writing, it is easy to overlook silly mistakes.

Suggested Formula for Cover Letter

77 Massachusetts Ave.
Cambridge, MA 02139

September 1, 2018

Mr. John Doe
College Relations Coordinator
Technology Corporation, Inc.
11 Beacon St., Suite 7
Boston, MA 02134

Dear Mr. Doe:

First Paragraph: Introduce yourself by stating your degree program and the year in which you will graduate. Specify the type of position you are seeking (e.g., summer internship, full-time position). Tell why you are writing, and name the position, field, or general vocational area in which you are interested. Tell how you heard of the opening or organization (e.g., the job posting on MIT's CareerBridge, the career section of the company's website, or through a faculty recommendation).

Second Paragraph: Mention one or two qualifications you think would be of greatest interest to the employer. Illustrate these qualifications by describing experiences where you demonstrated these skills. Tell why you are particularly interested in the company, type of work, or location. If you have related experience or specialized training, point it out.

Third Paragraph: Close by stating your desire for an interview. You may say that you will call in a week or so to request an appointment. Make sure that your closing is not vague, but makes a specific action from the reader likely.

Sincerely,

Jane Doe

Sample Cover Letters

Jane Doe
XXX Memorial Drive
Cambridge, MA 02139
janedoe@mit.edu
617-XXX-XXXX

Recruiter's Name
Campus Recruiter
Company Name
Company Address
Boston, MA 02116

September 15, 2018

Dear Campus Recruiter:

I am a senior at MIT majoring in biology with a concentration in management from Sloan Business School. I was extremely impressed with Deloitte's approach to consulting after speaking with Yelena Shklovskaya. Deloitte is unique in having the ability to form diverse teams to tackle all the problems a client may have. As a member of the Strategy & Operations group, I may have the opportunity to meet and work with a variety of people in this consulting group, in other areas of consulting, and outside of consulting as well. In particular, I like the amount of attention and dedication that Deloitte puts into working with its clients, not only by devising effective strategies to address the clients' problems, but also by often implementing the recommendations on-site. Therefore, I am very interested in the Business Analyst position with Deloitte.

In the past two years, I have been involved in strategy consulting, pharmaceuticals, and government affairs for a non-profit healthcare organization. This summer, I worked in strategy consulting for Putnam Associates. My 6-member team evaluated the marketing efforts for a major pharmaceutical company's organ transplant drug. Through my management of recruitment and interviews with 98 physicians, I obtained primary research and analyzed it on national and regional levels to recommend and help implement improvements in the client's marketing plan. I learned how to work in a deadline-oriented environment, held responsibility for large segments of a team project, and enhanced my quantitative skills through analysis of primary and secondary research data. In addition, I conducted independent research to form recommendations when launching a drug that follows a related product, and I presented these key considerations to all Putnam employees.

I have been a volunteer in public policy for 7 years with the March of Dimes Birth Defects Foundation. I lobbied Senators at both the Massachusetts and California State Capitols, as well as on Capitol Hill in Washington, D.C. Lobbying has taught me negotiation skills, the need for contingency plans, and the ability to make quick yet innovative decisions. Two years ago, I was appointed Director of Massachusetts Youth Public Affairs and asked to be a member of the state's Public Affairs Council. My responsibilities include developing, organizing, and implementing the Foundation's annual public policy objectives in an ultimately results-driven environment.

Through my experiences at Putnam Associates and the March of Dimes, along with my modeling work in the MIT Sloan Business School, I used my management skills to negotiate and consult with others, analytically design a successful plan, and execute my ideas. I am confident that I can bring my strong, diverse technical and business background to best fit the current needs and future ventures of Deloitte.

I welcome the opportunity to speak with you about my qualifications and ways that I can contribute to Deloitte. Thank you and I look forward to hearing from you soon.

Sincerely,

Jane Doe

Jane Doe

7 Consultant Avenue
Cambridge, MA 02139
617-XXX-XXXX
tppstudent@mit.edu

Navigant Consulting
125 High Street
Boston, MA 02110

Dear Navigant Hiring Committee:

I am a second year master's student in MIT's Technology and Policy Program (TPP) writing to apply for a consulting position in Navigant's Emerging Technology & Business Strategy group. After speaking with John Smith at the MIT career fair, I realized that Navigant's values of excellence, continuous development, entrepreneurial spirit, and integrity align with the principles that guide me every day and that have driven me throughout my career. Moreover, I believe that my knowledge of the energy sector, passion for data analysis, polished communication skills, and four years of consulting experience will enable me to deliver superior value for Navigant's clients.

As a graduate student in MIT's Technology and Policy Program, I spend every day at the cutting edge of the energy sector. In my capacity as an MIT Energy Initiative research assistant, I use statistical analysis to investigate trends in public acceptance and regulation related to emerging energy technologies. Graduate classes in data science, energy economics, energy ventures and strategy, and technology policy have prepared me to help Navigant offer the expert services that set it apart from competitors. Furthermore, I will bring Navigant the same leadership skills that I used as the student leader for the MIT Energy Conference's Technology Commercialization roundtable and as the mentorship manager for the MIT Clean Energy Prize.

Even before MIT, my four years of work experience in consulting—first at LMN Research Group and then at XYZ Consulting—allowed me to develop the skillset that Navigant looks for in candidates. As a science writer and policy analyst at LMN Research Group, I developed superb technical writing and visual communication skills, as well as an ability to communicate and collaborate with clients at federal agencies such as EPA and DOE. As a research analyst at XYZ Consulting, I developed an in-depth understanding of data analysis, program evaluation, and policy design.

I take pride in my skills and experience in several domains: critical thinking and analysis, communication, and leadership. I note that Navigant values these same ideals, and I very much hope to use my abilities in service of the firm and its clients. I look forward to speaking with you when you visit the MIT campus on October 10th.

Sincerely,

TPP Student

February 18, 2019

Raytheon Company
Integrated Defense Systems
50 Apple Hill Drive
Tewksbury, MA 01876

Dear Hiring Manager,

I am a recent graduate of MIT with a Bachelor of Science degree in Mechanical Engineering with a concentration in Engineering Management. I recently spoke with a Raytheon recruiter at MIT's xFair in February to discuss potential mechanical engineering related opportunities. I admire Raytheon's commitment to defense and security through the use of innovative technologies. With the combination of my engineering and management educational experiences, in addition to my work experience, I believe that I would make a great fit for the Systems Engineer position.

During my internship with Airbus working with fluid mechanic technology I evaluated wind tunnel and flight test data in order to reduce external airframe noise emissions. The analysis that I conducted involved examining data under varying flight conditions and extracting useful information. At the conclusion of my internship, I was able to provide my group with recommendations for improving the model scale testing in the wind tunnel to make better predictions for the flight test outcomes. My work was part of the group's task to provide continual improvements to the company's commercial aircraft. I would be excited to use my analytical skills to improve hardware systems, especially early in their life-cycle at Raytheon, when recommendations can have a high impact and positive result for the end user.

In addition to work experience, I have also practiced systems engineering in my coursework. Through my Optimization Methods in Management Science course I collaborated on a group project to optimize the constraints of a utility company in order to make residential demand response for the utility company a cost-effective tool. I specifically helped evaluate how transmission and distribution costs would incur through the implementation of a demand response program. This position helped me improve my communication and teamwork skills while delivering a project in a timely manner.

I am very excited about the work of Raytheon and welcome the opportunity to speak with you further about career opportunities at Raytheon and how I can contribute. Thank you for your time and consideration.

Sincerely,

MechE Student

Sample Faculty Cover Letter

Your Name
000 Memorial Drive, # 0000
Cambridge, MA 02139

August 25, 2018

Professor XXXX
Search Committee, IT 989
Department of Mechanical Engineering
University of XXX
Address
City, State Zip

Dear Professor XXXX:

I am responding to your advertisement for a faculty position in the Department of Mechanical Engineering at University of XXX. I graduated from the Department of Aeronautics and Astronautics at MIT in June with a doctorate, and am currently working as a Postdoctoral Associate at MIT in the Department of Aeronautics and Astronautics. My thesis work is in the area of active structural acoustic control using smart structures technology, and my specific research topic is the development of a new wavenumber domain sensing method for active structural acoustic control. My thesis advisor is Professor X in the Department of Aeronautics and Astronautics at MIT.

For my Ph.D. dissertation, I have worked on the development of the structural-acoustic control algorithms and their implementation for the reduction of radiated noise from vibrating underwater vehicles. The Office of Naval Research, with an objective of developing "smart" underwater vehicle systems so that the enemy cannot detect their attack in advance, has funded this project. My responsibility in this project is to develop the new technology to reduce the radiated noise from vibrating underwater vehicles. In order to accomplish this, I have developed a new wavenumber domain sensing method and applied it to the real-time estimation of acoustic power and the design of feedback controller for active structural acoustic control of the general complex structures. Furthermore, I have designed and experimentally implemented local and global controller architectures with different configurations to find the best controller configuration for the new underwater vehicle system.

I would like to continue my research on active structural control and active structural acoustic control for complex systems, including aerospace systems (aircrafts, helicopters) and underwater vehicles (submarines, torpedoes). I will carry out research on structure/fluid/control interaction phenomena and advanced sensor/actuator development using smart structures technologies. Also, I will extend my research to the development of advanced control design techniques for noise and vibration reduction of complex systems.

My ultimate research goal is to develop "intelligent structural systems", which will contain arrays of sensors and actuators, and embedded devices for controls and decision-making algorithms, so that those systems can coordinate large numbers of devices and adapt themselves to uncertain environmental changes in an intelligent manner. I believe my extensive research experience and specialization in structural dynamics and controls will allow me to continue my research in those areas.

I have enclosed my curriculum vitae with a list of publications, and a list of references. If you have any questions or would like to talk with me, I can be reached by phone at 617-XXX-XXXX or email at sample@mit.edu. Thank you for your consideration. I look forward to hearing from you soon.

Sincerely,

Your Name

Other Career Writing

Request for Informational Interview

Dear Ms. XXX:

Professor XXX, a faculty member in the Electrical Engineering and Computer Science department at MIT, suggested I contact you. I have been meeting with Professor XXX as a means of exploring the field of Speech Systems Technology as a potential career option.

He thought you would be a great resource to help me gain insight into the field and focus my job search efforts. I realize your time is very valuable so I would be very grateful if you would be willing to speak with me briefly (20 minutes) at your convenience. I would very much enjoy a chance to ask you some questions.

I have enclosed my resume for your review. I thought it might be useful as a way of informing you of my educational background and experience. I can be reached at mitstudent@mit.edu or (xxx) xxx-xxxx, or if you prefer I would be happy to contact your office within 10 working days to follow up with this letter. Thank you in advance for your time and effort.

Sincerely,

Your Name

Requesting to Reschedule an Interview Due to an Academic Conflict

Dear Ms. Harper:

Thank you for the invitation to participate in a site visit at your Seattle headquarters. The opportunity to visit, meet staff and learn more about the opportunities at Javentus is exciting; however, the dates provided for the site visit conflict with my academic commitments. In conjunction with my professors, I have identified other dates in March that I would be available to visit Javentus. Would rescheduling be possible?

Please know that I am extremely interested in the Developer position and working at Javentus. I hope another suitable date for a site visit might be able to be arranged. I look forward to hearing from you but will also be in contact by the end of the week to see if rescheduling might be possible.

Sincerely,

Your Name
Name@mit.edu
617-555-5555

Thank-You/Follow-Up Email

Dear Mr. Smith,

It was a pleasure speaking with you and Mr. Mansfield yesterday, regarding job opportunities at Supa Systems. I am very interested in the work you are doing and am extremely impressed with the advanced applications being used in your company.

As I mentioned during our conversation, my past two summer positions were related to the development and design of software programs for industrial computervision experiments. With my skills and interest in software design, I believe I could be of value to Supa Systems.

Thank you for your time. The interview was very informative. Please let me know if you need any more information about my background. I look forward to hearing from you.

Sincerely,

Your Name
Your Contact Information
(phone, address, email)

Letter Declining a Job

Dear Mr. Smith,

I am writing to thank you for the offer to join Northeast Electronics Laboratories as a member of the research and development staff. Unfortunately, I must decline your offer. I have accepted a position with another company.

It was a difficult decision for me because I was both excited and impressed by the work at Northeast Electronics. I appreciate you giving me the opportunity to meet with you and the members of the research staff.

Again, thank you for your time.

Sincerely,

Your Name
Your Contact Information
(phone, address, email)

Correspondence to Begin Job/Internship Negotiation Process

Dear _____:

First Paragraph: Express gratitude for the internship or job offer, including position title and department. Indicate how much the position, team, projects or company interests you.

Second Paragraph: In brief, share any questions about the offer that you would like to discuss with the employer over the phone if possible. For example, you may need more time to make a decision because of upcoming interviews, site visits, or other offers to consider. Indicate your need for more time, and the date by which you would be comfortable making a decision. Consider sharing MIT recruiting policies with the employer.

(Note: Although we request that all employers provide students with adequate time to make a decision, they are not always able to meet the exact deadlines requested. However, a compromise that is agreeable to both parties is often possible.)

Third Paragraph: Thank the employer again for the offer and for their time. Acknowledge that you understand the recruiting process is a very busy time for the employer. Ask if it would be possible to schedule a time to discuss the offer further, and provide several blocks of time during which you could give them a call. Keeping the employer's time zone in mind, try to offer them options within standard business hours of 9am to 5pm.

Sincerely/Thank you,
Student Name

General Structure of Interviews

Types of Interviews

Phone
Video/Skype
Face-to-Face at MIT
Face-to-Face at Employer Site

Style of Interviews

Behavioral
Technical
Case

Typical Interview Structure

- Greeting/small talk
- Interviewer questions and mutual discussion of your background and credentials as they relate to the needs of the employer
- You ask questions
- Wrap-up/discuss next steps in the process

Know the Policies for On-Campus Interviewing

- Interviews are generally conducted at the CAPD office (E17-294). When you arrive, sign in and wait for the employer to greet you.
- See CAPD Recruiting Guidelines for Students (**https://capd.mit.edu/jobs-and-internships/interviews-and-offers/recruiting-rights-and-responsibilities-students**)

Employer Rated Need of the Career Readiness Competencies

Competencies	Weighted Average Rating*
Critical Thinking/Problem Solving	4.66
Teamwork/Collaboration	4.48
Professionalism/Work Ethic	4.41
Oral/Written Communications	4.30
Digital Technology	3.84
Leadership	3.65
Career Management	3.38
Global/Multicultural Fluency	2.78

**5-point scale, where 1=Not essential, 2=Not very essential, 3=Somewhat essential, 4=Essential, 5=Absolutely essential; Source: Job Outlook 2019, National Association of Colleges and Employers*

Interviewing Tips

1. Research the organization

- Know what they do and where they do it.
- Find out what you can about your interviewer before the interview.

2. Practice in at least one mock interview

- Make an appointment with a counselor at CAPD through CareerBridge.

3. Make a strong first impression

- Dress appropriately and conservatively.
- Arrive 10 minutes early. Plan for commuting delays.
- Address the interviewer by his/her title (e.g. Dr. if appropriate).
- Offer a firm handshake.
- Maintain good eye contact and smile.
- Avoid heavy cologne and perfume. Some people are very sensitive to smells.
- Don't ask about salary/benefits unless the employer brings it up first.

4. Keep your responses focused and use your STAR examples (see page 53)

- Keep your answers to 2-3 minutes, unless you are asked to elaborate further.
- Prepare examples ahead of time (STAR: Situation, Task, Action, Results).

5. Quantify and be specific

- Generalities rarely impress.
- Specific and quantifiable responses are the most compelling.

6 Summarize at the end of each answer as to how you approach that type of situation

- Consider stating something like 'So in general, when I have to interact with a difficult coworker, I...'
- This leaves the interviewer with the take-home message that you want him/her to remember.

7. Be clear on how you fit the job opening; convince them with examples that you could be a valuable team member

8. Express appreciation for the opportunity to interview

- Thank the interviewer and ask about next steps.
- Give a firm handshake before you leave.
- Send a follow-up thank-you email or note.

Behavioral Interviews

Behavioral interviewing is a technique used by employers in which the questions asked assist the employer in making predictions about a potential employee's future success based on past behaviors. In behavior-based interviews, candidates are asked to give specific examples of when they demonstrated particular behaviors or skills.

Effective Formula for Answering Behavioral Interviews

S: Describe the **S**ituation you were in
T: Describe the **T**ask you needed to accomplish
A: Describe the **A**ction you took
R: Describe the **R**esults of your experience

Use the STAR Formula to Prepare Examples for the Interview		
Skill	**Your STAR Story**	
Teamwork	Situation: Task:	Action: Result:
Decision Making	Situation: Task:	Action: Result:
Persuasion	Situation: Task:	Action: Result:
Communication Skills	Situation: Task:	Action: Result:
Time Management	Situation: Task:	Action: Result:
Multitasking	Situation: Task:	Action: Result:
Leadership	Situation: Task:	Action: Result:
Problem Solving	Situation: Task:	Action: Result:
Adaptability	Situation: Task:	Action: Result:
Goal Setting/ Achievement	Situation: Task:	Action: Result:
Creativity	Situation: Task:	Action: Result:
Conflict Management	Situation: Task:	Action: Result:

Adapted with permission from Virgina Tech's Career Planning Guide.

Case Interviews

Certain employers—especially management consulting firms—use a "case interview" technique to determine how well-suited you are to performing their type of work. Case interviews are used to measure your problem-solving ability, your tolerance for ambiguity, and your communication skills.

Potential Components of Case Interviews

Brainteaser

- Can be little or complex logic puzzles
- Can involve quick math and give you a chance to demonstrate your conceptual skills
- Examples include:
  - "Why are man-hole covers round?"
  - "If a wall clock reads 3:15 pm, what is the angle between the hour and the minute hands?"
  - "How would you weigh a plane without a scale?"

Estimation Question

- May be longer than brainteasers
- May require you to be adept in making assumptions and working with numbers, facts, and the unknown (usually you will need pencil and paper)
- Examples include:
  - "How many car batteries are sold in the U.S. each year?"
  - "How much does all the ice in a hockey rink weigh?"
  - "Approximately how many pharmacies exist in the U.S.?"

Project Case

- May be written or verbal and take 45 minutes or longer
- Practice is important; some firms will have sample cases
- Examples include:
  - "You are called in by Pizza Hut to help them develop a strategy for the home delivery market in which Domino's has the dominant position. As lead consultant, what would you do?"
  - "Your client is a mid-sized hotel chain. How would you develop a pricing strategy for the client?"
  - "A U.S. company is considering expanding internationally. If its labor costs are competitive, what issues might influence its decision?"

What Employers Look for

1. Enthusiasm and ability to think out loud and brainstorm
2. Listening skills, pace of your response, ability to restate the problem, focus
3. Use of sketches, charts, diagrams to describe your logic
4. Ability to summarize final recommendations in a clear and concise manner
5. Confidence

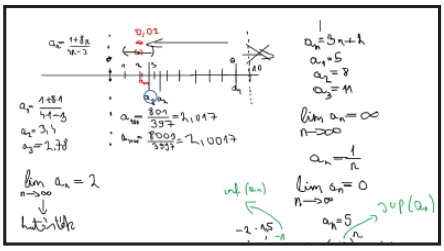
Common Mistakes

1. Ignoring cues of the interviewer; asking open-ended questions throughout the entire interview
2. Making poor assumptions and being disorganized
3. Spending too much time on smaller aspects and not referring back to the big picture
4. Not responding well to criticism or questions about your assumptions or your solutions

Additional Resources

1. Practice cases on the websites of large consulting firms
2. MIT Sloan Business Club (**http://www.mitsbc.org**); Consulting Club at MIT (**web.mit.edu/mitconsulting**); **www.vault.com**; **www.casequestions.com**; **http://www.acethecase.com**

Technical Interviews



Technical questions help an employer decide whether or not you have the skills necessary to complete your day-to-day work. The technical questions asked should reflect the experience you've put on your resume, so, in a sense, this is an employer's verification of what you've listed on your resume. Technical questions can incorporate drawing and sketching, coding, or even a written test.

Refresh your technical skills

- Read your resume and make sure you are comfortable with the skills you've listed
- If you state you are an expert in something, be prepared to be asked expert-level questions
- Find sample technical questions and practice

Mentally prepare

- Research the job description and make sure you brush up on the required skills
- Read more about technical interviews so that you are comfortable with the process
- Practice the points you want to get across

Communicate clearly

- Think out loud and describe your assumptions as well as the test cases you will use
- Sometimes getting to the right answer isn't as important as having your interviewer understand your thought process or approach to the question

Be prepared to sketch or write on a whiteboard

- Practice this so that it feels natural in case it is necessary
- Remember a simple solution is better than a complicated one

Ask clarifying questions

- Interviewers expect you to ask for clarification on ambiguous instructions, just as you would in a work environment
- This can show them that you understand what else you need in order to solve a problem

Take their advice

- If you are offered a suggestion, take it or offer a very good explanation for why you don't think it would work
- Show them you can work collaboratively

Consider bringing in a portfolio of your work

- A notebook with code or designs can highlight your skills

Have a closing statement in mind

- Express enthusiasm for the role
- Let the interviewer know why you are the right person for the job

Send a thank-you note

Video and Phone Interviews

General Tips

- Prepare as you would for a behavioral interview (see page 53).
- Find a quiet place for the interview where you won't be disturbed.
- Place a sign on the door "Interview in progress—please do not disturb" and close the door.

Phone Interviews

- Make sure you have a good signal and charged battery if using a cell phone.
- Have a "cheat sheet" of compelling story topics that highlight your accomplishments. Do not, however, write out answers ahead of time, so that your responses remain natural.
- Have your resume in front of you. If the interviewer references it, you can easily respond.
- Consider having key words at hand such as strengths and weaknesses. This may make it easier to respond.
- Consider printing out the job description and highlight key attributes so you can remember to reference relevant skills.
- Have a pen and paper handy for taking notes, and a glass of water.
- Speak clearly into the phone.
- Get the interviewers names ahead of time so you know to whom you will be speaking. Look them up if possible.
- Dress so that you feel confident, even though they can't see your clothing
- Have a short list of questions about the job and organization.

Video Interviews

- Set up your video conferencing system in advance and test it with a friend. Make sure you are comfortable troubleshooting should that occur.
- The camera should be at the same height as the top of your head. You look better when the camera looks down slightly towards you.
- Do not wear tinted glasses. Anti-glare coatings are highly recommended for clear lenses so the viewer can see your eyes.

- Look directly into the camera, not the image of the interviewers. This is tough to do, so you should practice with a friend. Put a sticky arrow pointing at the camera if that helps you remember. Making eye contact is critical for conveying trustworthiness.
- Use good posture, as if you are in the same room with the interviewer.
- Beware of your background. The simpler the background the better.

On-Site Interviews

Lead candidates are often invited for an on-site interview

Set Up Your Travel Plans

- Familiarize yourself with the location; determine travel times and plan for unforeseen circumstances so that you arrive 10-15 minutes early.
- If you plan the trip yourself, keep ALL receipts for reimbursement.
- If the employer plans the trip, get a detailed itinerary with the contact info of the person who made the arrangements.

Mentally Prepare

- Plan for a long day of interviews. When you arrive you will likely be given your interview schedule with the names and titles of individuals. Keep this agenda because you will want to send each interviewer a thank-you note.
- Be prepared for your interview schedule to change even last minute. Graciously accommodate any changes that occur.

Bring What You Need

- Copies of your resume
- A leather folder with a notepad, a good pen
- Tissues

Interviewing

(also while eating)

- Make sure to use proper dining etiquette! Choose something easy to eat and do not order alcohol, even if over 21.
- Keep smiling and keep your energy and enthusiasm up. It is a long day but it is important to make a great impression throughout the day.
- Be sure to thank each interviewer for his/her time.

Human Resources Department Interview

- Ask final questions; they will let you know next steps.
- Do not expect an offer at this time. If you do receive a verbal offer, you do not have to accept it then. Thank them and let them know that you are not prepared to make a decision. Ask for a written offer and the timeframe for a response.

Unexpected Questions

You may get an unusual question. Stay cool, think, and give an honest answer. The question is intended to force you to react under some stress and pressure.

- If you could be a superhero, which would you be and why?
- Do you prefer cats or dogs?
- Name five uses for a stapler without staples.
- How would you describe making an omelet to someone who has never made one before?

Sample Interview Questions

Personal Assessment

- Tell me about yourself.
- What are your greatest strengths and weaknesses?
- Give me an example of when you showed initiative.
- Describe your ideal job.
- Define success. Define failure.
- What can you offer us?
- What motivates you to put forth your greatest effort?
- Tell me about a leadership role you have had. What makes a good leader?
- Where do you want to be in 5 years? Ten years?

Education and Experience

- Describe your most rewarding accomplishment since you've started college
- Tell me about the most satisfying job you ever held. The least?
- What kind of boss do you prefer?
- What frustrates you on the job?
- How would a former supervisor describe your work?

Career Ambition and Plans

- What are your long-range and short-range goals and objectives?
- What qualities does a successful manager possess?
- What qualities does a successful team player possess?
- What kind of challenge are you looking for?
- What do you think determines a person's progress in a good company?
- What are your ideas on salary?
- What personal characteristics are necessary for success in your field?
- Do you prefer to work on your own or under a supervisor?

Behavioral Questions

- Tell me about a time when you had to deal with someone whose personality was different from yours.
- Give me a time where you had to carry out a directive with which you did not agree.
- Describe a time when you saw a problem and took action to correct it rather than waiting for someone else to do so.
- Tell me about your most successful presentation and what made it so.
- Tell me about a meeting where you provided technical expertise. How did you ensure that everyone understood?
- Tell me about a time when there was a conflict in a job/lab/class project. How did you handle it?
- Describe a time when you took a risk. What were the biggest challenges/problems you encountered in college? How did you handle them?
- Talk about a time when you had trouble getting along with a professor/team member/supervisor?
- How are you conducting your job search and how will you go about making your decision?
- Describe a situation in which you used persuasion to successfully convince someone to see things your way.
- By providing examples, convince me that you can adapt to a wide variety of people, situations and environments.
- Give me an example of a time in which you had to be relatively quick in coming to a decision.

Company or Organization

- Why do you want to work for this organization?
- What do you know about our organization?
- What section (service or product) are you most interested in?
- How do you feel about working in a structured environment? A non-structured environment?
- What do you think it takes to be successful in a company such as ours?
- In what ways do you think you can contribute to our company?
- How long would you expect to work here?
- Are you willing to work overtime?
- Are you willing to go where the company sends you?
- What type of environment are you most comfortable with?
- Why do you think you might like to live in the community in which our company is located?
- Why should I hire you?
- What makes you the best person for this job?

The Close

- When could you start work?
- Is there anything else I should know about you?
- Do you have any other questions?

Sample Questions to Ask an Interviewer

You are expected to have several questions to ask your interviewer(s) when they give you the opportunity, usually towards the end of the interview. Make sure your questions are respectful and reflect well upon you as a candidate. Below are some possible questions you could ask. Remember that the interviewer is the driver of the interview so you should not dominate it; however, a few well-thought-out questions lets the interviewer know you are fully engaged and interested in the role.

The Position

- Would you describe the duties of the position for me, please?
- Can you tell me about the primary people with whom I would be working?
- What skills do you see as most important in order to be successful in this position?
- To whom would I be reporting?
- What kinds of assignments might I expect the first six months on the job?
- How and when would my performance be evaluated?
- Can you tell me about the people who would be reporting to me?
- Is this a new position or am I replacing someone?
- May I talk with the last person who held this position?

Career Paths

- Can you tell me about the career path this position offers?
- What is the growth potential in this position? Where does this role fit in the growth strategy of the company?
- About the people who have preceded me in this position and in the department, where are they now and what are they doing?
- Is it your usual policy to promote from within?
- How are promotions or transfers determined within the company?
- Does advancement to upper management usually require an advanced degree?
- Have you cut your staff in the last three years?

Education and Training

- What additional training might be necessary for this position?
- Is training done in a classroom/group session or is it handled on an individual basis?
- Are there training programs available to me so that I can learn and grow professionally?
- What type of on-the-job training programs do you offer?
- Does the firm support further college education for its employees?

Assessment Questions for Interviewer

- What kind of personal attributes and qualifications does your company value?
- What characteristics are important for this position?
- What is the most significant challenge facing your staff now?
- What have been some of the best results produced by people in this position?
- What are your projections for this department/position for the next year? (specify type of projections e.g. sales, production, products, profits)
- What do you see ahead for your company in the next five years?
- What are your plans for expanding the (sales, audit, research, etc.) department?

General Questions for Interviewer

- Can you tell me a little about your own experience with the company?
- What do you like best about your job/company?
- Are you happy here?
- If you could change one thing about the company, what would it be and why?
- When do you expect to make a hiring decision for this position?
- Could you describe the hiring process?
- Is there anything that we have discussed today that would give you concern regarding my candidacy?
- In what ways is a career with your company better than one with your competitors?
- What is the largest single problem facing your staff (department) now?

Etiquette

Make a Great First Impression

- You only get one chance
- If you attend an info session, plan on staying the entire time; it is rude and unprofessional to walk out on a presentation
- Know the appropriate attire and be 5 minutes early for interviews
- Be respectful and polite to everyone, not just the interviewers

Know the Recruiting Policies

- Know recruiting timelines, deadlines, and norms of behavior; see **https://capd.mit.edu/jobs-and-internships/interviews-and-offers/recruiting-rights-and-responsibilities-student**
- Behave within those guidelines; the employer should do the same

Communicate Promptly and Respectfully

- Respond within a couple of days to employers
- A lack of rapid response reads as disinterest or rudeness
- Always use a professional tone with employers (see pgs 45-51 for examples of written communication)

Advocate for Yourself

- Ask questions if you are confused
- Ask for: more time to make a decision, request a new interview date, or to negotiate
- Talk to a CAPD counselor about how to talk to employers or recruiters

Say What You Mean, and Mean What You Say!

- Saying yes verbally or in an email is a commitment with or without a contract
- Do not accept unless you are confident in your decision
- ***Reneging is not an option supported by CAPD***

Choosing Between Offers

Rate the level of importance to you of each factor first. Then rate each offer on a scale of 1 – 10. Multiply the level of Importance factor by the Job score and insert in the appropriate column. Total and compare.

Factors	Importance (1 – 10)	Job A (1 – 10)	Importance x Job A	Job B (1 – 10)	Importance x Job B
Job content					
Creative & challenging work					
Fit with culture & environment					
Opportunity to make an impact					
Decision-making authority					
Opportunity for career advancement					
Fit with my experience & skills					
Training/educational opportunities					
Job flexibility, work/life balance					
Supervisor and colleagues					
Support from management					
Title					
Other:					
Size of company					
Reputation of employer					
Management style					
Location					
Other:					
Base salary					
Bonus/stock-options etc					
Benefits (pensions, insurance, vacation etc)					
Perks (car, memberships, cafeteria, etc)					
Travel required					
Commuting requirements					
Other:					
TOTAL					

What's Your Salary Range?

START

Market Rate Salary Range

Begin by determining the market salary range for the position you are negotiating.

- ❑ Review salary data in the MIT Graduating Student Survey
- ❑ Review the Bureau of Labor Statistics Pay Data Range for your field/industry/location **https://www.bls.gov/bls/blswage.htm**
- ❑ Review salary comparison websites such as **www.glassdoor.com**, **www.payscale.com**, and **www.salary.com**

Use this data to determine your market range:

Low (10%) $ _____ **High (90%) $** _____

NEXT

Personal Salary Range

Determine your personal salary range based on your own financial needs. It can be helpful to prepare a budget to understand what your monthly expenses might be. (Remember to consider things like housing, utilities, food, transportation and parking, health, entertainment, family or pet expenses, student loans, etc.)

Minimum salary to meet your budget needs	$
Ideal salary to meet your desired lifestyle	$

Use this data to determine your personal range:

Low $ _____ **High $** _____

PREPARE

Before you negotiate, use the assessments above to fill in these key numbers.	
Salary you would ***like*** to earn	$
Salary you ***need*** to earn	$
Salary you would be willing to settle for	$

When you have an offer, you're ready to negotiate!

Negotiating a Job Offer

Give Initial Response to Offer	• Respond gratefully even if the offer is below expectations. Ask to have some time to think about it, and agree on a response date.
Research	• Fill out the job evaluation worksheet on the previous page. • Find salary and bonus data for your major and industry; use the Graduating Student Survey at **https://capd.mit.edu/resources/survey-data** • Determine market rate salary range and your personal range (see page 62) • Consider negotiating non-salary items as well (see next page). • Watch this video on negotiating salaries **https://bit.ly/2Kickdc**
Psychological Preparation	• Why do you want to negotiate? • Do you know what you want to achieve? • How will you respond to counteroffers? • What are your alternatives? • What are you willing to accept?
Develop a Strategy	• Consider all factors, including your own strengths and weaknesses as a candidate. • How serious are you about this position over another? Do you have other offers with pending deadlines? • Time your negotiations accordingly; don't wait until the last minute.
Practice	• Ask a friend or someone at CAPD to represent the employer. • Ask them to negotiate at the extremes of possible employer response and behave in an accommodating manner and then in a less accommodating manner so you are ready for all possibilities.
Contact the Organization	• Identify who is best to negotiate with—Human Resources? Your interviewer? Call to present your items to be negotiated—be enthusiastic and reassure them of your interest in the position. • Keep it positive and respectful; negotiating should be a win-win. • If they meet your requests, tell them thank you and as soon as you get the information in writing, you will be ready to accept it.
Get Terms in Writing and Decide	• Always make sure you have an offer in writing prior to accepting to confirm all parties are on the same page. • Review your needs and goals to determine if the negotiated offer is the right fit. • Provide your response as soon as possible, especially if you decide to decline the offer.

Negotiating a Job Offer *continued*

21% of undergraduates and 24% of Master's students negotiated their salary

The average negotiated increase in salary of undergraduates was $9,053 and $13,506 for Master's students

The average negotiated increase in bonus was $22,513 for undergraduates and $15,280 for Master's students

Top 3 factors affecting whether undergrad accepted a job
- job content
- creative/challenging work
- fit with culture
- 13th on list: Salary

Source: CAPD 2018 MIT Outcomes Survey

What Can Be Negotiated?

Usually Negotiable	Sometimes Negotiable	Usually Non-Negotiable
Offer Deadline	Telecommuting	Vacation
Start Date	Position Title	Health Insurance
Salary	Position Location	Retirement Savings Plan
Signing Bonus	Performance Review Timing/ Frequency	Non-Disclosure Agreements
Relocation Expenses	Non-Compete Agreements Timeframe	Other benefits that apply to all employees

How to Decline an Offer

- Always be polite regardless of your response to an offer.
- Start off with a positive statement thanking the organization for their offer.
- Let them know that you will unfortunately have to decline.
- Provide them with an appropriate reason for the decline (you have another offer you are going to pursue, the location, the benefits, etc.).
- Thank them again and wish them well.

Applying to Graduate School

Research

Talk to your academic advisor and/or a counselor at CAPD about your career goals and preparation for graduate school. Self-reflect about why you want to attend and what you hope to accomplish. Research programs of interest and evaluate the following:

- ❑ Curriculum and degree requirements
- ❑ Faculty
- ❑ Research, teaching, and internship opportunities
- ❑ Financial support
- ❑ Location and size
- ❑ Job opportunities upon graduation (where are the graduates now?)

Prepare

Get experience (see page 11) and do informational interviewing (see pages 13-14) to refine your interests.

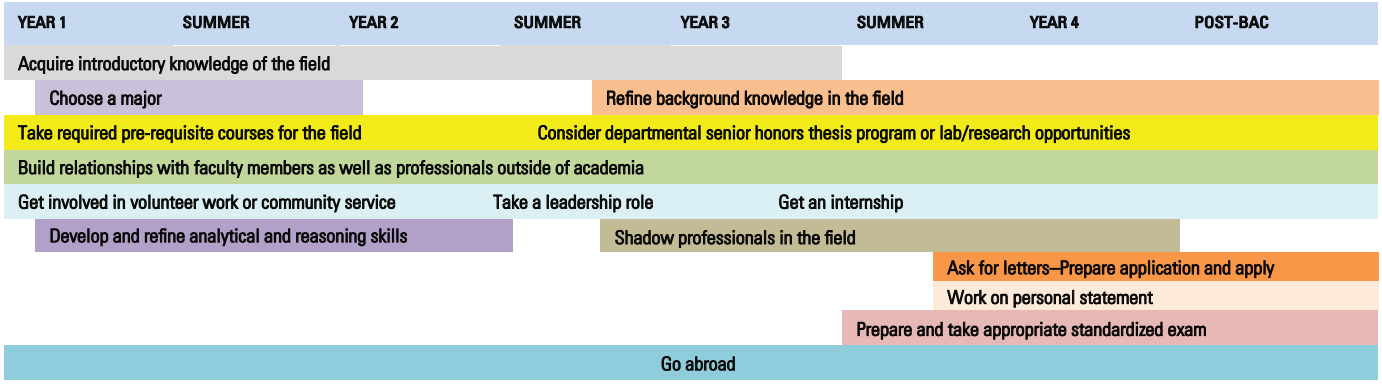
- ❑ Create your resume; visit CAPD for Quick Queries to have it reviewed
- ❑ Ask for Letters of Recommendation as you network and work with professors, professionals, and mentors
- ❑ Prepare for and take the appropriate standardized tests based on your graduate school list of requirements (e.g. GRE, GMAT, LSAT, etc.)

Apply

Determine application deadlines and required materials and make a list and timeline. Below are typical requirements but check with each program well ahead of the deadline.

- ❑ Application form
- ❑ Statement of Purpose and/or Personal Statement
- ❑ Letters of recommendation (typically 2-3 depending on program)
- ❑ Official transcripts from all higher education institutions attended
- ❑ Official score reports from standardized exams
- ❑ Interview
- ❑ Resume
- ❑ Supplemental materials requested
- ❑ Application fee

Sample Timeline



Sample timeline reprinted with permission from the University of California, San Diego's Triton Career Guide.

Statement of Purpose

A Statement of Purpose is typically one of the requirements for graduate school admission. It should reveal your experience, motivation, maturity and readiness to pursue graduate education and should be tailored to each department to which you will submit an application. It is very important to spend the necessary time to make it a compelling document.

Steps to Creating a Strong Statement of Purpose:

1. Research the programs

a. Make a spreadsheet containing the departments and programs of interest. Read about them online and request more information from them. Enter relevant info into your spreadsheet (e.g. location, areas of research, financial support, faculty of interest, etc.).
b. For areas of research interest, read scientific reviews to get an understanding of the field and its current challenges. Refine your areas of interest based on what you have learned.
c. Consider where each field might lead you. Is it cutting edge, or an area that has waning interest?

2. Reflect on your experiences and why you are applying

a. What were the major moments in your life that led to your current research interest(s) and to these departments or programs?
   i. What or who influenced your decision or interest (e.g. role models)?
   ii. Why did you choose your undergraduate major?
   iii. Why did you choose your undergraduate research topic(s), field, and/or department?
b. What are your career goals? What do you hope to accomplish? What drives you? What motivates you?

3. Make an outline

a. Based on your reflections above, define a central theme for the body of the statement
b. Organize the outline into sections
c. Your outline should cover these areas with specific examples where possible:
   i. What aspects of the school/department/program appeals to you?
   ii. What are your research interest(s) and how did you become interested in them?
   iii. What are your experiences that relate to this area (e.g. research experiences, courses, etc.)?
   iv. What are your career goals (e.g. professorship)?
   v. What characteristics of the department or program can help you accomplish your goals?
   vi. What positive aspects do you bring to the department or program?

4. Write a draft of Statement of Purpose

a. Always use positive language when referring to yourself.
   i. Don't apologize if your research experiences are not all related. Exploration is expected at the undergraduate level and helps you learn what you want to pursue.
   ii. Write in a confident, but not arrogant manner.
b. Give detailed examples, but make every word count (be concise).
c. Use transition words, sentences and paragraphs. Your statement must read smoothly.
d. Refrain from starting neighboring paragraphs the same way.
e. Have strong opening and closing paragraphs.
f. Thank the admissions committee for their time at the end of your Statement of Purpose.

5. Revise and edit

a. When you are finished with your draft, read it out loud to yourself and make corrections.
b. Ask friends, colleagues and professors to read your edited draft. Take their comments into consideration, revise and edit your draft.

Modified from ***http://web.mit.edu/msrp/myMSRP/docs/Statement%20of%20purpose%20guidelines.pdf*** *by Anthony O. Okobi*

Faculty Job Search

Timeline

The academic job search generally begins in the fall and continues into late winter or early spring, depending upon the institutions hiring cycle. Below is what you might expect as you pursue roles in academia:

Sep - Nov—Seek advice and support from your advisor and other mentors. Networking is also a great way to find opportunities and meet new people in your field. Research your targeted institutions and consider the following:

- What role do you want?
  Research (how much)? | Teaching (how much)? | Other roles within the institution?
- What kind of academic institution do you want to work in?
  How big? | Public, private, something else? | Students (what level)?
  Funding? | U.S. or International?

Create your CV, Cover Letter, Research Statement, and Teaching Philosophy. If you are a post-doctoral fellow, see the Assistant Director of Postdoctoral Scholars; if a grad student, visit CAPD and have your documents reviewed by one of our counselors.

Nov - Jan—Prepare for screening interviews at annual conferences. Ask advisors to help if they can; for example, by making calls on your behalf. Do a mock interview (for post-docs see the Assistant Director for post-doctoral scholars; grad students should make an appointment with a counselor in CAPD).

Jan - Mar—Prepare for campus visits. Some may begin with a telephone or Skype screening interview. Most academic interviews will include a presentation of your research and a chalk talk. After every interview always follow up with an enthusiastic thank-you email to the committee for their time.

Mar - May—This is when most receive offers and some may enter into negotiations, if necessary. Be sure you are being offered the space and resources you need to be successful.

Documents

Academic CV—While there is no standard format or style, you should consult with people in your discipline about particularities of CVs in your field. See page 40 for general CV Guidelines. This handbook has two CVs (CV#1 and CV#2) that were used successfully for academic positions. Make sure your research is strongly displayed on pages 1-2 followed by a detailed teaching section.

Publication section in CV—List in reverse chronological order and put your name in bold

- You can use asterisk* on papers for which you made a leading contribution
- You can also create separate categories: "Publications" "Presentations"
- Can group Publications in sections e.g.: "Books" "Refereed Articles" "Abstracts"
- Can list "Works in Press" "Submitted Articles" or "Manuscript in Preparation"

Research Statement—Length can vary, generally 4-7 pages and should include both your current and future research, along with your collaborations. And your future should align with their future. Often they include graphs and/or charts to deliver a visual message and may also include language highlighting your ability to obtain funding.

Teaching Statement—Reflects your philosophy as a teacher, and identifies what undergrad classes you would teach and what graduate courses you might develop; usually one page.

Cover Letter—One-page introduction that highlights your abilities to successfully work in their environment (see several MIT Cover Letters in this handbook).

Sample Statement of Research Interests

CURRENT RESEARCH

Active Control of Rotorcraft Vibration

I am currently working with Boeing Helicopters to develop advanced control techniques for control of rotorcraft vibration, so that the vibration typically experienced by helicopters can be significantly reduced. My advisor Prof. Steven Hall and his former doctoral students developed the X-frame actuator for those purposes, and I am working on the design and implementation of the advanced Higher Harmonic Control (HHC) algorithms using the X-frame actuator for an MD-900 helicopter. The advanced HHC includes an intelligent anti-windup scheme, which shows better performance than traditional discrete HHC. The intelligent anti-windup algorithm ensures that the output signals from each controller do not saturate, so that multiple HHC systems can be implemented without causing any difficulties. The active rotor system with the advanced HHC algorithms will be flight-tested in 2003.

Active Control of Noise Radiated from Underwater Vehicles

I have worked with Northrop Grumman Corp. and Materials Systems Inc. to develop new technology for the reduction of radiated noise from vibrating underwater vehicles using smart structures technologies. This project has been funded by the Office of Naval Research, with an objective of developing "smart" underwater vehicle systems so that the enemy cannot detect attack in advance. My responsibility in this project is to develop the control architecture and methodology to reduce the radiated noise from vibrating structures. In order to accomplish this, I have designed two different controller architectures. The first one is the assembly of local controllers, which are implemented for each sensor/actuator pair to reduce its vibration level. The second one is a global controller, which makes the structure a weak radiator by coordinating the action of local controllers. In order to implement the global controller successfully, I have developed a new wavenumber domain sensing method and applied it to the feedback controller design for active structural acoustic control. The approach is to minimize the total acoustic power radiated from vibrating structures in the wavenumber domain. The new sensing method greatly simplifies the design of MIMO LQG controllers for active structural acoustic control by reducing the effort to model the acoustic radiation from the structure and allowing the systematic development of state-space models for radiating wavenumber components. Further, I have extended the concept to general complex structures, so that it can be applied for reducing radiated noise from any vibrating structures. The new sensing method is numerically validated on a thick-walled cylindrical shell with 55 piezoelectric panels mounted.

FUTURE RESEARCH GOALS

My future research goal is to develop "intelligent structural systems", from the micro-scales (MEMS) to macro-scales (aerospace systems and underwater vehicles), which will contain array of sensor/actuator pairs and embedded devices for controls and decision-making algorithms. Those systems should be able to coordinate large numbers of devices and adapt themselves to uncertain environmental changes in an intelligent manner. For this research goal, I will focus on the following three research areas. First, I will carry out research on structure/fluid/control interaction phenomena for complex systems. The phenomena will be critical design issues in those complex structural systems, both in micro- and macro- scales, so the fundamental understanding of the phenomena is very important to successful implementation of the structural/acoustic control algorithms. Second, I will extend my specialization in smart structures technologies to the development of advanced sensors and actuators for intelligent structural systems. Since the systems will contain arrays of embedded devices, such as micro-sensors and actuators, the development of novel sensors and actuators that can be coordinated and integrated within the systems will be critical in future areas of research. Finally, I will continue my research on advanced control and decision-making algorithms for noise and vibration reduction of complex structural systems. Some of the important requirements of the algorithms include: (1) the ability to handle many sensors and actuators in an efficient manner, (2) robustness to modeling error and uncertain environmental changes, (3) the ability to modify their functions adaptively even in the unexpected change in the plant or environment, and (4) the ability to detect the failure in the plant and maintain the performance by reconfiguring the algorithm architecture. As mentioned earlier, I have developed the novel wavenumber domain feedback controller design method for active structural acoustic control of complex structural systems, which satisfies the first and second requirements. I will continue my research to improve the performance of the method, and therefore to develop "intelligent control design methodology" for complex structural systems, so that those four requirements given above will be successfully satisfied.

Sample Statement of Teaching Philosophy and Interests

My teaching goal is for each and every student to leave my classroom with a solid understanding of engineering concepts and a sound background to analyze engineering systems. I strongly believe that a thorough understanding of undergraduate/graduate courses is most fundamental to young engineers for their future research. My responsibility as instructor would be to help students acquire a solid foundation in the subject matter, and to encourage them to build confidence in their knowledge of the course material, so that they can apply what they learned in my classroom to engineering problems with confidence. I have a very strong undergraduate and graduate education in mechanics, dynamics and controls. Also, I have extensive research experience in structural dynamics, acoustics, and controls, which would allow me to teach students fundamental concepts of engineering systems thoroughly. My primary interests in undergraduate/graduate level teaching lie in the following areas:

UNDERGRADUATE LEVEL

- **Mechanical Vibration —** This course would involve basic introduction to mechanical vibration, including free and forced vibration of single- and multi-degree of freedom systems, fundamentals of frequency and modal analysis, and approximate solution techniques.
- **Engineering Mathematics —** This course would be an undergraduate-level introduction to engineering mathematics, including linear algebra, differential equations, complex analysis, and Laplace and Fourier transforms.
- **Feedback Control of Dynamic Systems —** This course would involve introduction to design of feedback control systems, focusing on properties and advantages of feedback systems, time-domain and frequency-domain performance measures, stability and degree of stability, root locus method, Nyquist criterion, and frequency-domain design.

GRADUATE LEVEL

- **Advanced Structural Dynamics and Acoustics —** This course would first review single and multiple-degree-of-freedom vibration problems, using matrix formulation and normal mode superposition methods. Then, the course would present various topics in structural dynamics and acoustics, including time and frequency domain solution, random vibration, vibration and noise measurement and analysis techniques, wave motions in structures, structure/fluid interaction problems, and acoustic radiation.
- **Control of Structures —** This course would present fundamental control-structural dynamic interaction from a unified viewpoint, applicable to active control of flexible structures, and active structural acoustic control of structural systems.
- **Multivariable Feedback Control Systems —** This course would be an introduction to the state-space approach to control system analysis and control synthesis, focusing on design of "robust" controllers for mechanical systems, including optimal control methods and the Kalman filter.
- **Continuous and Discrete Time Signal Processing —** This course would provide a theoretical foundation of signal processing techniques necessary for mechanical engineers. This course would focus on the analysis and processing of experimental data, and real-time experimental control methods, including Laplace and Fourier transforms, spectral analysis, filter design, system identification.

These present general topics and I would be happy to teach more specific courses according to the needs of the students and the department.


SCAN ME