

MAXIMIZING YOUR OPPORTUNITIES IN A COMPETITIVE JOB MARKET

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Welcome to the ninth annual Human Factors and Ergonomics Society Career Panel. The job market in our industry has changed significantly over the last year and the questions addressed by this year's panel speak to the issues that exist in a difficult job market. This year, the panel answered four questions to help readers prepare for a career in Human Factors and Ergonomics (HF/E), particularly in light of the current economic climate. During the HFES meeting panel session, the panel will focus on questions from the audience.

QUESTIONS AND ANSWERS

What are the best ways to network inside (and outside) the HF/E community?

Jim. As a student, it is not easy to get your own network of HF/E professionals other than your professors and classmates. Therefore, getting to know people and organizations through them is always the best bet. When your professors have visitors in the lab, be part of the tour. When attending the annual meeting, follow your professors around and see if you can bump into some significant figures in the field. If you are a TA or RA, you can normally have your department prepare business cards for you. They can be very handy. Do not hesitate to drop an email to the people you meet at the conference or the people you know who are/have been involved in a field similar to yours. Your own network starts from here.

You can also try something by yourself. Join some mailing lists so that you can know what kinds of people are actively participating in the HF/E discussions. Whenever you see some topic of interest to you, don't hesitate to respond either to the group or to the person. At least somebody knows of your existence, and who knows, it is always a small world.

Bentzi. I have personally found that the most effective way to network inside the HF/E community is to join HFES and be active. One of the best ways to get involved is by becoming an active member of a technical group. That means asking the officers if you can help with special projects, writing for the newsletter, volunteering to chair sessions, and attending the annual business meeting. These activities are a good way to

meet people and familiarize people with your name. Often times, members who are looking to hire people attend the Annual Meeting hoping to find a good candidate.

Michelle. There are several possibilities: 1) Join a local HFES chapter and become involved with the program development. This allows one to meet other professionals and understand their programs and job activities. 2) Join a Technical Group of your interest and become an officer. Start with the role of newsletter editor or secretary/treasurer. It is a great way to introduce yourself to others in a HFES professional role. For example, calling HF/E professionals for articles for the TG newsletter allows one to interact with other professionals, and gain insights on what they are doing in the HFE field.

Arnie. You will naturally develop a network of colleagues through your career as you move through jobs. That process is accelerated, however, through professional involvement. You meet people at conferences (like HFES), chapter meetings, and other professional meetings. Often your friends from your various jobs will introduce you to new colleagues. You develop deep friendships, though, by not only attending but by getting involved. Ways to get involved include volunteering to help organize, running for office, editing newsletters, and so on. You get to know the other volunteers well, and you also have an excellent "excuse" to talk to colleagues you might not know. They get a chance to see you at work, and get to know your skills. Some of my closest friends now are friends I made while serving as a volunteer for various professional organizations. And, of course, try to never make enemies. You never know when you will need a friend!

Tony. Going to conferences is one of the best ways to network. However, just showing up will not accomplish much. You have to make a concerted effort to meet new people. Students often make the mistake of hanging out with the other students and faculty from their same university. Another common networking activity is to join related organizations and attend their local chapter meetings. For example, the Bay CHI meetings are very popular in the Bay Area, CA.

Ron. Jim points out that as a student "it is not easy to get your own network of HF/E professionals other than your professors and classmates." He is correct. It is not easy. However, it may be very important for you to do so, especially if, for example, your colleagues do not have contacts in the areas of the profession or the geographical areas in which you wish to live. Fortunately, most Human Factors professionals that I have met are very open to interacting with students, making the job "not that difficult" either. Jim also points out that it may be useful to follow your professors around at the HFES meeting as well. This is a good idea but one that should not be overdone, as you need to be perceived as being independent, especially since you may be looking for a significant leadership position in your new job. Thus, you need to make your own contacts as well. Oftentimes being successful at networking once you are on the job greatly increases your ability to get needed information, secure projects, get someone to assist you, or help you to find needed equipment once you do secure a position. Thus, interviewers may want to assess your networking ability during an interview.

So how do you network? Bentzi, Tony, and Arnie all point out that you should attend the HFES meetings and become involved. They mention volunteering to help a Technical Group and volunteering through the student volunteer process. These are excellent ways to meet people. Once you volunteer, remember to go the "extra step" of interacting with as many people as possible. You can also be involved by going to sessions, asking good questions, and following up with the presenters after the session. Other people have developed contacts in other ways. For example, offering to take notes at a meeting, and sending them to participants is a good way to begin building contacts, and most people are delighted to have a volunteer note-taker. Writing articles for TG newsletters and offering to serve as their webmaster are other good ways to network.

There are two HFES publications I have authored/assembled that provide more in-depth information regarding networking: *Quick tips for finding a Human Factors/Ergonomics job in industry* – written with Karen – (free at the HFES web

site) and *Preparing for a Career in Human Factors/Ergonomics: A Resource Guide*. If you have not read these publications yet, I recommend you stop by the HFES Central Office Table and read (or purchase) a copy of the Career Resource guide for your student chapter or personal use.

Each year, HFES hosts a session entitled Games To Explain Human Factors: Some Old, Some New, Some Borrowed, and Some Blue. Attendees are asked to help by serving as participants in a variety of the activities. As it turns out, while we cannot scientifically demonstrate cause and effect here, several of these participants have received job offers and/or opportunities to network further from someone who was in the audience when they volunteered.

Karen. I agree with what everyone else has said so far and I have a couple of additions. For students who cannot get business cards through their university for whatever reason, make some yourself. Office supply stores have generic business cards that you can purchase and print whatever you would like to on them. It is very convenient to have such "calling cards" when you meet people, especially at professional meetings.

Another approach I have taken to increase my network is to make "cold calls." If there is someone in a particular field of study, geographic location, or company/employer that I have an interest in, I have used the HFES directory and/or the internet to find and make contact with people. Be sure that you have a specific purpose for making such contact and are clear about it when you call someone. I have used this approach to get personal tours of facilities, create opportunities to meet people at conferences, to get contacts for jobs, and to establish contacts in a region that has relocation possibilities. Be sure that you are respectful of other people's time when using this approach. Most people are happy to help you and/or share their experiences with you as long as you are not pushy and do not make unreasonable time demands of them.

How do I prepare myself for the possibility of following more than one career pathway (e.g., academia, government, industry, consulting)?

Bentzi. I believe that pursuing a Ph.D. and having a research area that is both theoretically interesting but at the same time very applied affords one the most flexibility in terms of career choice. Without a Ph.D., academia is unlikely to be an option. Also, within the human factors and ergonomics community, the credibility and expertise that comes with the Ph.D. is vital for consulting as well as for many industry and government positions. This is unlike management

consulting and other types of industry jobs where there is no expectation of a Ph.D. As mentioned, having a theoretically interesting, though applied research focus is also helpful. Academic positions will likely require both, while the latter will look useful for government, industry, and consulting jobs. Most importantly, if at all possible, pursue your Ph.D. with a well-known advisor who has connections.

Ellen. Regardless of the career path you choose, there are several skill sets in addition to the ability to perform human factors work that employers want a potential hire to have. For example, written and verbal communication skills, marketing ability, and leadership and mentoring skills are critical for all career pathways. The ability to demonstrate some depth and breadth along these skills sets will allow employers to determine that you are not only a good fit for the organization at this point but also for the future. For example, at a research-oriented academic institution, potential colleagues want to feel comfortable that you will be able to perform and publish scholarly research, to bring in grant money by writing successful proposals, to advise undergraduate and graduate students, and to contribute to the university and the research community at large with service activity. Industrial companies want to be certain that you can communicate well with clients and co-workers, can develop ideas to aid in obtaining contracts or sales, and can collaborate well with team members.

You can demonstrate these skill sets at school, on the job, and through volunteer opportunities. Written and verbal communication skills can be demonstrated through activities such as articles, reports, papers, presentations, proposals, and demonstrations. Marketing ability can be exhibited through activities such as proposals, demonstrations, and client visits. Leadership and mentoring can be shown by activities such as project management, positions held in organizations, and coaching.

Michelle. Develop a robust skill set based on the HF/E principles of analysis, design, development, and evaluation. Work on projects that allow you to apply research design skills, evaluation skills, and writing skills. Practice your presentation skills by seeking opportunities to present parts of projects that you may be working on. Statistical skills, computing skills, and research design are core skills that transverse across multiple occupations. Content expertise can be built over the years, and is based on using these research and development skills.

Arnie. This is an interesting question. When I hire people from academia, I look for applied experience. If they have been teaching and running an active research program (their success in these areas tells me a lot about them), I also want to see perhaps some consulting work

or internships/sabbaticals at corporations. On the other hand, as a practitioner who has an eye on someday returning to academia to share experiences and to follow up on some of the applied research questions I have been saving up over the years, I do two things. I try to teach when I can (e.g., serving as an adjunct faculty member, giving guest lectures, and so on). I also try to publish regularly, and to sneak a little research in here and there when I can. Obviously this takes a commitment to spending time over and above what my company is paying me for, but it is an investment in career options.

Tony. The key word is "diversity" – whether you want to prepare for multiple career pathways, or just for one! If you can publish a few papers, give a couple of presentations, evaluate and redesign a consumer product or two, and make sure that you receive a solid education in research methods and statistics, you will put yourself in a good position to do anything!

Ron. As several of my colleagues have mentioned, be sure to publish while in school. Also, learn a lot about industry and the government through web sites, journals, and other periodicals. If you are interested in applied work, do some, first in school (if possible) through class projects, next through independent projects, and finally by doing one or two co-ops or internships.

Once you are on the job for a few years, you might wish to take some alternative career paths. These can be either temporary or permanent changes and could involve working in corporate learning or education, managing a human factors group, managing a development group, working with customers in a sales or services capacity, or working as a product developer. This type of assignment will increase the breadth of your experiences, and will most likely make you a better HF professional as well. As you think about following more than one career pathway, keep these alternatives in mind. If you have any interest in these areas, always be building a resume for each of the positions of interest with every project you complete.

Karen. Try to give yourself the broadest set of experiences that you can while you are in school. Do research with multiple faculty members to expand your experience. If a faculty member in your department does expert witnessing or consulting, see if you can work with him or her for a particular case/client. Try to teach at least once while you are in school. It gives you a great opportunity to improve your oral communication skills and it will help you clarify your interests in the academic pathway. If your school cannot provide you with a teaching opportunity, look into the possibility of working as a part-time instructor for a local liberal arts college. Occasionally, such schools can pay you better than your department pays for a TA, but they usually require that you have a Master's. The more you

understand about the job opportunities out there, the better able you will be to make an appropriate career choice. Do not tell yourself that something is a perfect job for you until you have a good understanding of what the job truly entails. I have seen a number of students who prepare themselves for a particular pathway and find that when they actually go do they job they worked so hard to get, they hate it. That would not have happened if they had allowed themselves to have more realistic job previews. Preparing yourself for multiple pathways can serve as a safety net to protect you if you find that a particular pathway is not what you thought it would be.

With so many experienced people out of work and/or applying for jobs, how do I stand out from the crowd?

Jim. Be confident. You should have confidence in the training you receive from your school and your professors. Other than that, prepare yourself well. Be intensively involved in your schoolwork and treat every course seriously. Every class project may lead to something you will find interesting or related in the future. Also, by performing well in the class, you let the professor know more about your capability, and find yourself a great reference for your resume.

Bentzi. There are a couple possible ways, and the response is a little different depending on whether you are pursuing a Master's or Ph.D. For both, attending a top program helps immensely. Program name recognition goes far with employers. Studying with a well-known advisor (for your particular area) is important because his or her letter of recommendation will carry a lot of weight. Also be sure to follow through with connections you have made through networking.

If you are pursuing a Master's degree, make sure your advisor is not just well known in academia, but also in industry. One of the most important pieces of advice is to be sure to take on challenging internships or co-ops. At the Master's level, grades do not mean much. That is, employers will see dozens of resumes showing high GPAs, so think of the GPA as a tool to get your resume noticed so that you can pass the first cut. It will not get you a job. After employers are convinced you are intelligent, the next thing they want to know is how competent you are. This is where you can really stand out. Employers love to see relevant and diverse work experience through co-ops and internships. You have to do a good job of explaining what you accomplished in your resume. That means do NOT simply explain what you did (e.g., "Supervised production line"), but rather, explain what you did and what it resulted in (e.g., "Supervised production line. Increased output by 8%

and reduced defects by 80% while cutting operating costs by 2%). Companies are results driven, so make sure to emphasize your results. The other reason internships and co-ops are so important is that they often lead to permanent jobs.

If you are pursuing a Ph.D., publish early. Academic hiring committees understand that recent Ph.D.s cannot be expected to have many peer-reviewed publications. That means that if you have a few, and they are in high quality journals, you will stand out. Shop around for Ph.D. advisors and select one that is well known, well respected, has a good reputation as a mentor, and will provide you with opportunities to work on research, develop your skills as a researcher, and publish. Publications are useful even if pursuing government, industry, or consulting jobs because they show evidence of intellectual development, work ethic, and commitment to results.

Michelle. Demonstrate what unique skills, abilities, or knowledge sets that you possess and have experience in. Identify how they are related to the jobs you are interested in. Build on networking in the content or domain area that you are interested in. Work on projects so that you can show what you have contributed to and how the team accomplished its goals.

Arnie. It is indeed difficult to stand out. You need to distinguish yourself from different sets of "competitors." You can distinguish yourself from other new graduates by the success you have had in your education, by professional activities, leadership experiences, and internships. Compared to more experienced people, your advantage is potentially in knowing something unique. You might not have the breadth of experience, but you can have deep knowledge in emerging areas of interest to an employer (e.g., in designing for a relevant new technology). You can also use your inexperience to your advantage by projecting a style and willingness to learn quickly, and to jump in with energy and commitment.

Tony. Focus on your abilities rather than your experience, grades, etc. If you put the prospective employer in the mode of looking at what you have done in the past, then you will always come out behind a more experienced person. The trick here is to give them a vision of the future, what their company will be like with you working there. Explain to them how you will help them sell more of a product, reduce customer support costs, improve the design process, increase the satisfaction of their users, etc.

Ron. The key here is showing that you understand the employers needs, that you have the needed skills, and that you know how to apply them to the employers business needs. Additionally, demonstrating meaningful accomplishments through publications, leadership,

presentations, co-ops, and/or internships will help make future employers more confident that you will deliver outstanding results for them.

Karen. Go the extra mile during the application process. Use your network to help you, when possible, to get your name noticed by someone making the hiring decision. Be sure that you write an appropriate cover letter that is tailored to the position you are applying for. Point out the match between the attributes listed in their advertisement and your skills and abilities, without restating everything on your resume/vita. The cover letter should make someone want to know more about you. If a name is not given in the advertisement, contact the prospective employer to identify the name of the hiring manager or search committee chair. A letter addressed to a particular individual can have a greater impact than one addressed generically. Contact the person you addressed your letter to and make sure he or she received your materials and offer to answer any questions he or she may have at that time. Putting forth the extra effort shows that you are genuinely interested in the job and that you are thorough.

How do I get the inside track on finding job openings in today's competitive market?

Jim. The HFES Bulletin and placement service are always a good start if you are looking for a job now. Do not count on the general job-hunting agencies or web sites because they know little about this field. Do your own homework. In the HF/E field, you should know by now who/where the schools, government agencies, companies, or consulting firms are, depending on your career plan. Those places should have their own human resources or employment department web sites that contain either their most recent listings, or if no positions available now, where you can submit your resume for their future reference. Try to visit their web sites as often as possible. You never know what will come up next week. You can also benefit from your own network (professors or acquaintances) by letting them know that you are looking for a job. A good academic advisor (your major professor) normally is the greatest help you can get in this matter.

Bentzi. Networking is effective, as is having a well-known advisor. Many professors will be contacted directly by companies in advance of official postings. These contacts are made because the companies respect the professor and want to hire his/her students. Finding out a faculty member's track record of placing students is one of the important factors to find out about when choosing an advisor. Certain online job search web sites post HF/E jobs regularly, as does the HFES job

placement service. If you are looking for an academic position, it would not hurt to subscribe to The Chronicle of Higher Education.

Michelle. This is linked to networking as described above. Attending conferences is another excellent opportunity to see who is doing what. Volunteer as a conference organizer to get to know HF/E professionals and have a position in which to approach them and discuss future jobs and other opportunities.

Arnie. Whoever comes up with the best answer for this should let me know as soon as possible. Seriously, I think questions 1 and 3 address this question. In a competitive market, you need to be there first. That happens through having a rich network of contacts that are willing to reach out to you when jobs appear. In this last year, I have been worried about layoffs several times and it has been through networking that I have been able to explore opportunities, in case the worst came to worst. But a company does not hire just because of the relationship at this point, they are searching for the person who best matches their needs. So you need to be able to clearly and quickly present your "value proposition."

Tony. First, do not limit your search to only HF-related job sites, as many companies do not know they exist. Second, send an email out to your friends and colleagues letting them know you are looking for a job. You will be amazed at how many companies are looking to hire, even though they don't have formal ads posted! Finally, use many search terms. HF jobs are often listed using terms like: usability, information architect, user experience, and even quality assurance.

Ron. Network, be thorough in your search and in your communications with prospective employers, and be very flexible in considering the ways that you can effectively help a business by utilizing your training and experience. Remember, the job does not need to have Human Factors, Ergonomics, or Usability in its title.

Karen. I agree with the other panelists that contacting members of your network is the first and most important step when looking for jobs. I also suggest that you be sure you are on the right lists to receive information about job postings. HFES has a student list-serve where job postings are occasionally sent. Often there are people or HFES chapters that have email lists to disseminate such information on a more local basis. If you are interested in particular geographic regions or HF/E subdisciplines, contact people in those areas to get yourself onto appropriate lists.

Note: The views expressed in this paper are those of the individual participants only and do not necessarily reflect the views of their employers.