# Tenure

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## 1. THE PROCESS

Tenure, as defined by Webster, is the "status granted after a trial period to a teacher protecting him from summary dismissal." (Apparently, Webster doesn't use gender-neutral language.) At many universities, tenure and promotion from assistant to associate professor go hand-in-hand. The tenure "clock" is usually a six-year clock (although it can vary from an eight-year clock to two five-year trial periods). For schools with a six-year clock, the official tenure review process actually begins near the end of the fifth year, but you should start thinking about it from Day One. There is nothing more daunting than the realization that you should have been aware of each step of this very changeable process instead of considering it only as your tenure approaches steadily in the last year.

First, make sure you understand the tenure process and rules at your institution. All universities have very detailed documents outlining their criteria for promotion and tenure and detailing the process; these are the written rules. Many universities also have additional college level and/or department level guidelines that elaborate a bit more on aspects that are important to that particular college and/or department. You need to make sure you have read all of these guidelines and understand them. These guidelines will give you a fair idea about what your university is seeking in its tenure candidates, and what you will need to achieve to get tenured. Take advantage of university-wide sources of information. Often, universities will run tenure panels/workshops, and, of course, they will have many accompanying hand outs. If the written guidelines are unclear, talk to your department head or some other person who is qualified to explain them. It also helps to know as many of the unwritten rules as you can. A mentor can help here. Find out what the expectations are; they can vary a lot from institution to institution. Find out how much research counts, and how it is evaluated. Find out how much teaching and service count. Don't rely on information about another department in your university; not only can departments vary greatly from institution to institution but they can vary within the same institution. Your department head and the senior faculty in your department are the people who are going to make the decision at the department levelusually the most important level. Talk to the senior faculty in your department and find out what their criteria are.

Some time at the end of your fifth year, you will submit your promotion and tenure dossier, usually consisting of your curriculum vitae (cv) and a personal statement. What you have accomplished goes into your cv—more on this shortly. The personal statement is typically a one- to three-page statement of your view of your research, teaching, and service endeavors, how your various contributions integrate, and how they are relevant to the computer science and engineering community. This is your vision statement; don't underestimate its impor-

tance. It is usually the first thing read by promotion and tenure committees and sets the stage for their reading of the rest of your dossier. Don't leave the crafting of it until a week before your dossier is due. Draft it in your first year and then edit it as your research, teaching, and service evolve. And remember that, other than your department committee, the people on the various committees are not experts in your field. Describe your contributions in well-educated layperson's terms. If possible, look at the personal statements of previous successful candidates. Letters of recommendation, solicited and collected by your department, are added to your dossier after you have submitted it.

There are usually several levels to your tenure evaluation during year six. It starts with the department promotion and tenure committee—a committee made up of tenured senior faculty that are elected or partly elected and partly appointed. This committee reviews your dossier and writes a letter that is added to the dossier recommending your case (or not) for tenure outlining the reasons why (or why not). Your case is also reviewed by your department head whose evaluative letter is added to the dossier. This is then usually followed by a similar process at the college level consisting of a review of your case by a college-level committee consisting of tenured senior faculty from the various departments in the college. Your college's dean also reviews your case. At each of these steps an evaluative letter is written and added to the dossier so that reviewers at later stages have access to the letters from earlier stages. Eventually, your case works its way up to the university level where another committee consisting of tenured senior faculty from across the university reviews your case. They make a final additional written recommendation to the university provost and/or president. It is possible (even likely) that the different committees focus on different aspects of your dossier—your department on your research and teaching contributions, your college on your teaching and your department's view of your research, and the university on your teaching and your college's view of your research. Each level is also able to contrast your case against a larger and larger pool of sixth-year cases from across the institution. Also note that the committee at each level is less and less likely to be familiar with your particular area of research and teaching. Again, think about this when you write your personal statement.

Your case for tenure could be stopped at any of these stages – the department, the college, or the university – by a negative recommendation. Some universities require that the case go through all stages (even for cases with negative recommendations at the department level) before the final decision is reached and the candidate is informed. It is usually rare to see a negative decision at a lower level (e.g., department) reversed at a higher level, although the opposite can and does occur.

## 2. THE CRITERIA AND BUILDING A DOSSIER

Tenure is evaluated based on your contributions in teaching, research, and service. The importance and relative weight of these depends on your university; know the rules at your institution, in your college and in your department. The following are standard criteria for tenure evaluation at a research-focused institution.

# 2.1 Teaching

The teaching portion of the dossier normally consists of a list of the courses you have taught, evaluations of your teaching from both students and faculty, an indication of your yearly academic advising responsibilities, and a list of the students you have supervised (e.g., B.S. honors, M.S., and Ph.D. research advisees). New courses developed and/or new ways of teaching existing courses may also be included. Teaching evaluations can consist of in-class student evaluations, peer evaluations by fellow faculty, evaluations of teaching from exit interviews of graduating seniors, and teaching evaluations from questionnaires sent to alumni.

Be aware that good teaching is very important, even in primarily research-focused institutions. You will become more effective as a teacher—and improve your dossier—if you take teaching seriously and work to improve yourself. Consider your philosophy about teaching. What are you trying to do when you teach a course? What is important to you? You need to think about your goals and purposes in teaching and to be able to articulate these in your personal statement. Show your commitment to teaching by being aware of issues broader than the scope of a particular course.

#### 2.1.1 Classroom Instruction

You should try to teach a variety of courses—but not too many. Teaching a variety of courses will demonstrate confidence in different aspects of teaching. Choose a few courses that you are comfortable with and are interested in and ask the department head to give you those courses. You don't want too many courses, though; teaching new courses from scratch will inevitably overwhelm you and result in poorer evaluations compared to those you would receive after teaching a course for the second or third time. Review committees look for improvements in in-class teaching evaluations with second and third offerings of the same course and they understand that good in-class evaluations are harder to get in low-level undergraduate courses compared to advanced graduate courses.

Also, don't get pigeon-holed into teaching huge, beginning classes all the time. Evaluations from large classes are almost always worse than those from smaller classes. Appeal to the department head if you are assigned to beginning classes all the time. Ask to teach upper division or smaller classes. Of course, you don't want to teach these classes exclusively; teach large classes, too, so they know you're versatile. Your review committees need to know that—at the very least—you can do an adequate job of teaching on all three levels: beginning courses, upper division courses, and graduate level classes.

Develop your own course if possible. Developing your own course, whether it is an undergraduate or a graduate course, will indicate to the evaluating committees that you are committed to teaching. Developing special projects—like a programming project or a software engineering project—for your students takes even more time and shows even more commitment.

Build on the work of others. You don't have to teach every course completely from scratch. Talk to people who have taught the class before. You can get copies of the materials and the syllabus for the class and work from those. Check for material on the Web; often PowerPoint slides are available that you can revise/augment.

Get feedback. After the class, ask for criticisms from the students. Don't feel defensive about it. Students will usually give earnest critiques of your performance. When you are accessible to your students, provide help, and are interested in them, your student evaluations will improve. Ask good teachers to visit your class. Be aware that few college professors have experience with learning how to be an educator, although they spend much of their careers as one, so try to find people who have reputations as good teachers and ask them to critique your class. Your university may have a faculty development office, or other similar resources to help you improve your teaching. Videotape your class and have someone from this office or a mentor review the tape with you.

Offer to teach an advanced graduate course in your research area. If scheduling of such a course proves to be impossible, offer to teach a one-credit reading course as an overload. Do this in your first year as a way of attracting graduate students to your research program. You can arrange a reading course so that it's not too much work for you. Collect all the recent research papers in your area you wish you had time to read. Have each of the students in the class choose one to present. Present the first one yourself to set the tone for the type of presentation you want the students to give. Require everyone to read every paper—one way to enforce this is to require everyone to ask at least one question in class about each paper. When the class is over you have a group of students up to speed in your research area and eager to work with you (not to mention finally having found the impetus to read all those papers).

# 2.1.2 Graduate Student Advising

Supervision of graduate dissertations is an important element of your dossier. Work to attract good graduate students. Graduate students are a great resource. They can help with your research and your research productivity. Also, when the university evaluates you for tenure, they will inevitably ask: Has she worked with graduate students? How many Ph.D. students has she produced? Where are those students now? Of course, if you do not start working with Ph.D. students early on in your tenure process, chances are that the students you do have will not be producing work early enough to affect your evaluation. After all, it takes about five years for a graduate student to complete a Ph.D. So work with M.S. students as well. Just beware that masters students require more organization on your part because they are going to complete their degrees in two years. You need to have a clear idea of what you want your masters students to accomplish in that short time frame. Also be aware that weak students can take a lot more of your time and effort than good students. Its better to say "no" than to take on a student that you suspect can't do the work.

Of course, advising students, even the good ones, takes an enormous amount of time. You are the one that provides both the intellectual and emotional support for the student. Sometimes doing research for a Ph.D. can isolate students; you need to encourage them periodically to continue. Aside from the satisfaction you get from helping these students, the students you advise and work with reflect your efficacy in mentoring and teaching.

# 2.2 Research and Scholarship

The research portion of the dossier normally consists of a list of your publications, external grants and contracts, creative accomplishments (major software and hardware systems—artifacts—developed and their impact), papers presented at professional meetings, participation in

seminars and workshops, invited talks, professional honors, awards, etc. At research (and most teaching) institutions, there is just no way to get around having to have a good research record. Being able to describe your research contributions succinctly and in general terms in your personal statement is very important.

Have a comprehensive plan of research. It is very hard to make an impact when you are jumping around between different areas; publishing a few papers in several areas means you won't be well known in any. Your publications must be relevant to your overall plan of research. And this plan of research should be reflected in your personal statement. Produce quality work that is relevant to your statement. Keep in mind that the quantity of published works is far less an issue than is the quality of the work. It is unlikely that an evaluator will have read every one of your papers. Your evaluator will, however, have read a select few of your papers. Make sure your work is coherent and has sufficient impact. Weed out any junk; resist the temptation to engage in too much LPU (least publishable unit). You have failed to make a good impression if the only paper that is read happens to be your worst, or if it contains a minor result, or if it is not clearly faithful to your stated research purpose.

Be aware that if you pursue interdisciplinary research areas you may be faced with greater difficulty in getting tenure than would someone in a more traditional field. Some research inherently requires collaboration with people outside the department. Unfortunately, this means you have to work harder to get people to know you, because you're covering more ground. You need the support of people from each field involved. You might consider playing it safe by pursuing interdisciplinary research after you have earned tenure at a university.

## 2.2.1 Research Publications

Publications consist of your refereed journal papers, refereed conference proceedings papers, books and parts of books, and nonrefereed publications. Journal publications are important. Although there are some departments that understand the value and importance of conference publications, journal publications are a staple to making your research known. And college-level committees almost never appreciate the importance of conference proceedings publications because, in many disciplines, essentially all papers submitted to a conference are accepted (even though classified as refereed conferences). Some institutions distinguish between conference submission that are fully refereed (i.e., full papers are submitted) and those that are referred by abstract. Be careful about keeping track of which is which because there may be people on the upper-level review committees that know, for instance, that a particular conference is refereed by abstract; if you fail to correctly classify your papers they may start to wonder about other papers you have listed. Also included in the dossier are letters of acceptance for manuscripts or papers that have been accepted for publication.

Make sure your journal papers are in as highly ranked journals as possible, i.e., any journal published by the ACM or IEEE is usually considered a top-rated journal. There are many journals that are not considered quality outlets. Put your best work in the best journals in your area. Some departments even maintain a ranked lists of the journals in their area. If there isn't such a ranking system in your department, there are several ways that you can find out which journals are the most important. Look over the authors of papers in a journal; do you recognize them? Are they the people in your field that you respect? More important than the absolute ranking of the journal is how your department perceives its importance. Ask people in your department about which journals are important to them. Also ask your potential letter writers. Your letter writers will note in their recommendation

that you published in a top journal if you follow their suggestions. Sometimes your research will fall short of excellent. Everyone has papers like that—papers with good, but not great, results. Consider submitting them to second-tier journals or conferences. And sometimes your papers will be rejected. Read and reread the reviews. If the paper can be salvaged, revise and resubmit making sure you address all reviewers' concerns. Nothing is more irritating to a reviewer than to get another paper from an author with the same problems they complained about the first time around.

If possible, don't put all of your best papers in the same journal. There may be problems with delays and turn-around times; also—depending on the journal—the paper might get published between six months and two years after submission. And tenure review committees can get suspicious if all of your publications are in the same outlet. Remember, though that there are people that want to help you. Do not be afraid to tell the editor that you are up for tenure in a year and you would like a quick response to your submission.

Find the right mix of journal and refereed conference publications. Get an idea of how many of each you are expected to do. The department head should be able to tell you this. There is some amount of flexibility in this as well; if you feel that you need eight journal papers and you only have six, you have not necessarily diminished your chance at getting tenure. It just means you have to have a few more conference papers, or you have to have a strong teaching performance, or you have to have that additional external funding. And some tenure cases can be made on the outstanding contributions of a single journal paper (although that is the exception, not the rule).

Also consider the differences between journals and refereed conference proceedings. Areas of computer science and engineering tend to be fast moving; the problem with journals is that it takes longer to get an article published. Conferences, in contrast, publish more timely material. And you get to go and present your work in person, giving you additional visibility in your research community. Many conferences in computer science and engineering are very competitive and very highly respected by your immediate community. You will find out quickly (and sometimes painfully) which ones are highly valued. Include the acceptance rates of your refereed conference proceedings publications in your dossier. Just remember, journals are considered more scholarly by most scientists and engineers. Consider a strategy of extending and revising a conference publication and submitting it to a journal. Most journals will not accept a conference paper that has not been extensively extended and revised.

Electronic journals are becoming increasingly popular and important. The problem with electronic journals is that at the higher levels of your tenure evaluation consist of people who may not be familiar with the idea of electronic journals. Deans probably will not understand; other faculty might not understand. If you have published in an electronic journal you will need to make a strong case about the journal's legitimacy. Show that the review process of the electronic journal is the same as the process for the conventional, respected journal.

How about a paper with multiple authors? The problem with extensive collaboration is that it is difficult to determine how much you contributed to the paper. Of course, if your collaborators are students, most people will understand that you probably contributed greatly to the paper. In fact, co-authored papers with graduate students are a positive indication of your ability to supervise and mentor graduate students. If you decide to make the statement that you are the major contributor to a paper by listing yourself as first author, it is crucial that you are justified in saying so, and that you are not slighting your

coauthors. You do not want a former collaborator killing your chances for tenure by announcing that you were not the major contributor to a work in which you have claimed first authorship. Some disciplines (and researchers) automatically list authors in alphabetical order, although that tends not to be the norm in computer science and engineering.

Collaboration in research is engaging and fun; however, depending on area you might also want to have some single-authored publications. In some areas, such as in theory, you need to establish yourself as someone who is capable of researching independently. Experimental research, by contrast, is most often done in teams, where multiple-authored papers are the norm. In either case, beware of continuing to coauthor papers with your Ph.D. research advisor.

#### 2.2.2 Funding

Another important area is research funding. Keep track of all proposals and grants that were submitted, funded, are in progress, or are completed. Receiving funding from a peer-reviewed funding agency, like the NSF, makes a strong statement about your work. Your peers have deemed your research of sufficient quality to qualify for a limited pool of research funding (for which they are probably also competing). Certainly you should consider applying for an NSF CAREER award in the summer after your first year on the faculty. CAREER proposals contain both a research and a teaching section; you have to demonstrate contributions in both areas.

Especially if your department is in a college of engineering, some funding from industry is desirable. Your department head often has a pool of money given by industry friends of the department that can get you started in that direction. Some agencies tend to only support groups of researchers or well-established researchers (e.g., DARPA) so be careful about putting too much effort in that direction unless there is some reasonable chance for pay-off. The May issue of CRA's quarterly newsletter, Computing Research News (you'll automatically receive a copy if your department is a member of CRA; if it's not, it should be) contains a list of all relevant federal funding agencies giving contact names, phone numbers, and e-mail addresses. Don't be afraid to call a program manager to ask them if your research is appropriate to submit to their program. NSF program managers, in particular, are especially helpful. The same warnings given about collaboration in publications holds true for research funding. Try for a mix of individual and group-funded research projects.

For the pre-promotion and tenure candidate it is also important to keep track of proposals that were submitted but not funded because it shows an activity profile. It is better to have tried and not gotten funded than to never have tried at all. Having a proposal declined can be a painful experience. Read the reviews carefully. Call the program manager for guidance. Based on this input, revise and resubmit.

# 2.2.3 Creative Accomplishments

You may be involved in research that requires the development of artifacts (e.g., a VLSI chip, simulation system, network, software system, robot). Unlike lab apparatus of other disciplines, computational artifacts embody the idea as well as being a means to observe or measure it. Thus, if you are involved in experimental research that requires the building of artifacts, their impact will need to be evaluated as well. Examples of impact might include the number of downloads of a piece of software, the number of users, the number of hits on a Web page, and, of course, statements about their impact from your letter writers. Think about how the community will best evaluate your artifacts and build this into your experiments from the start. Just remember, popu-

larity is not equivalent to impact. And be aware that such research usually has a longer lead-time (from idea to output) than more theoretical work. Make sure the time span from idea to measurable output for your research is less than six years! Another factor to be considered is that experimental research is usually more expensive in terms of personnel (number of graduate students and staff needed to do the work) and infrastructure (equipment and lab space). These two factors—time to output and cost—often make extensive experimental research too risky for pre-tenure faculty.

#### 2.3 Service

The service portion of the dossier normally consists of a list of the department, college, and university level committees you have served on and a list of your external service activities (service to the profession through professional societies, service to your community, etc.). Find out how important service is and resist the temptation to become involved in more service than is healthy for your tenure case. Usually, service is not important compared to research and teaching. A typical formula at a research institution might be 45% research, 45% teaching, 10% service.

There is very little opportunity for pre-tenure level faculty to participate at the college and university level. Most of your service at your institution will be on department committees. Try to have at least one leadership position (i.e., committee chair). Department service that benefits students is also usually considered good service for junior faculty (e.g., serving as faculty advisor of a student ACM or IEEE chapter). You should also have a record of contributing to university programs at home and abroad. You will probably be involved with efforts to increase the number of women in computer science and engineering; these are outreach activities that count. Contributing to other programs that enhance equal opportunity and cultural diversity also counts.

Service to your profession, typically through service in a professional society activity (e.g., conference or technical committee) is important for two reasons. Such activities count as service to the profession and they are a way to meet and, hopefully, impress people who might eventually be writing letters of recommendation. Work your way up to serving on important committees. The best way to do this is to let some friendly senior person in your field know that you would like to serve. But don't shoot for program chair as your first position. Volunteer to be local arrangements chair (or something similar) and do a really good job. Then work your way up to a position on the program committee. Senior people in computer science are often overburdened with program committee and editorship responsibilities. They simply have too much to do. If they encounter a talented, responsible, and reliable junior person who says "I'd like to do this" they will probably respond with delight and work to make sure the junior person gets the position. Becoming an associate editor for a journal toward the end of the pre-tenure period will indicate to your evaluating committee that you are a capable member of the academic community. So do a good, prompt job of reviewing papers for journals to suitably impress those editors-in-chief.

Service to governmental agencies is also very important. Participation on an NSF panel or workshop counts as service. Service to the public also counts. Delivering career booklets to the local high schools and talking to girls about how interesting it is to be a computer scientist or engineer are good ways to participate.

Choose service with your tenure process in mind. Moderate your volunteerism and choose to serve on committees that help you with the tenure process. For instance, serving on a graduate recruiting com-

mittee will avail you access to the students' folders—invaluable information for targeting students to work with you. Or serve as colloquium chair; as chair you can bring speakers to campus to give you visibility as well as helping you to make a future contact.

Learn quickly when and how to say no. This might seem simplistic or obvious, but it is a critical point. Women in particular need to say "no" because women are frequently asked to take on service projects, despite the dubious benefit of some service to your eventual promotion and tenure. You need to establish yourself as a good citizen of the department, but you do not want either your research or your teaching to suffer greatly. Get involved, but not in over your head. Say no nicely—"I'll really like to do that, but for now my first priority has to be getting promoted and tenured." People should understand.

#### 3. HOW TO BUILD A STRONG CASE

Ask to see the CVs and the personal statements of successful cases. Anyone who has received tenure will proud of it. (It would actually be more informative if you can get the unsuccessful ones, but these are understandably more difficult to procure.) If some senior faculty member in your department happens to have served on the college and/or university committee, go and talk to them. Ask them to look over a draft of your dossier (be prepared to follow their suggestions). Also keep in mind that expectations change over time. Finding out what the expectations are in your first year and assuming those expectations will hold for another five years is folly. Keep informed about what the department, college, university needs or wants. The target may be moving.

## 3.1 Constructing a Complete Dossier

One thing to be aware of during the tenure process is that you are evaluated by information you provide in your dossier that should be a fair representation of your years at the institution. It is often difficult to reconstruct the activities you participated in in your first year if you wait until your fifth year to start working on your dossier. So practice good record keeping. Start a file into which you put a note about activities that might be used to construct your dossier. When in doubt, file it. You can always toss it out later if it proves to be an activity that will not be recorded in your dossier.

Keep track of your successes. Most universities have a teaching award. Being nominated for such an award, even if you don't win it, is an honor. Make sure it gets recorded in your dossier. If you spend a lot of time working on some course development, write it up and put it in your file. Not only should you keep track of successes in terms of what you did, but also keep track of students who are successful. In your sixth year your department head might write to these students and ask, "Can you give me a supporting letter saying this professor was particularly influential in your education?" Letters from students whom you have made a great impact upon carry a lot of weight. Start a "kudos" file containing electronic mail from students whose praise your teaching talents.

# 3.2 External Letters of Recommendations

External letters of recommendation from senior people in your research area are an extremely important part of your tenure case. In such letters, people primarily evaluate your research contributions. They also are asked to discuss the impact of your research on the field. They need to be able to say that you have made a significant contribution to a particular area. Create your target list of six to ten people to ask for letters of recommendation; do this right away - don't wait until

year six. Revise your list yearly. It should contain mostly people at the full professor rank from institutions considered to be at or above the rank of your home institution. A few names can be from industrial research lab researchers. Try for at least one name from outside North America. Some universities disallow letters from collaborators; think about this when you start on a collaborative project. If you have collaborated with all of the senior people in your immediate research area, there will be no authoritative people to write letters attesting to your research contributions.

Whether your department allows you to choose people to ask for letters or your department seeks out these people on its own, you can cultivate good letters proactively. Attend conferences and workshops. Get involved. Give as many research presentations as you can. Volunteer to serve as your department colloquium chair. As colloquium chair you can invite likely letter candidates to your university to give a talk. Not only will you will have the opportunity to spend the day with them and to show them your vision of research, you might also be able to wrangle an invitation to give a colloquium at their institution. If you have produced a paper that you think is relevant to work that somebody else has done, send that person a copy. Don't flood these people with a deluge of your work; choose key works and send those only.

You also need to be visible and known to the people in the top departments. Try to give a talk at each of the top ten departments in your discipline within your first three years. (By year five it's almost too late.) Don't be reticent about calling them up and saying "I'm going to be in town on this date to attend this conference; and I'd be happy to come by and give a colloquium at your department." Few people are comfortable doing this at first, but it is a crucial opportunity for you to create. Soon you will be invited to give talks. Not only will your increased visibility help establish you in the field so that you get strong letters of recommendation, it could also help you get funding for your research.

A good time to network is at your job interviews; do not decline them lightly. Go to universities and make a good impression. When you are asked to interview, the universities and researchers are focusing on you. This is a great opportunity to network and prime potential letter writers. Ask questions about their work, or about a talk they gave.

# 3.3 Internal Evaluations

Official written evaluations, which are common to all universities, are a part of your dossier. At many institutions the yearly or bi-yearly review letters become part of the dossier. If there is no procedure for written evaluations at your university, ask your department head for written feedback. Getting your evaluations in writing is important. It is very easy to sit down with your department head to talk about your progress informally, but your department head might not be as aggressive in explaining the bad—as well as the good—points of your performance. Or you might only hear what you want to hear. You need a written critique to read, understand, and take to heart, uncluttered by the periphery considerations that might sabotage a casual encounter.

When you get your written feedback, expect some candid criticism. No one likes being criticized, but taking this criticism productively is essential in improving your case. You might be tempted to just put the review aside because criticism hurts. At some point you need pull the review out and study it. Outline ways that you will overcome each weak point. Set some reasonable goals for yourself and make sure you deliver. Future committees have access to earlier reviews and know what points you needed to work on. If you haven't addressed the

weaknesses enumerated in the critique, the committees will consider this a negative.

All universities have some way of evaluating the efficacy of your teaching. This evaluation usually manifests itself as an in-class written survey or questionnaire. Those results are compiled and added to your dossier. The department level committee is responsible for extracting a sampling of comments from these results. And often senior faculty or your department head come in and evaluate your teaching. They write up a form that is included in your dossier in the form of a peer review.

# 4. ASKING FOR HELP AND ADVICE

Your journey through the tenure forest can benefit greatly from the right advice. Don't be afraid to ask for help. First and foremost, stay on good terms with your department head. You will have to depend on them for guidance and help. But they can't really serve as a mentor as they are also your boss. So, don't hesitate to also rely on senior faculty for information and feedback. Getting feedback regularly is crucial to staying on track successfully. Senior faculty can review your grant proposals before you submit them, they can introduce you to people in the field, they can alert you to the intricacies of your particular institution, they can clue you into the "power structure" in your college, etc. If you can't find a senior faculty in your own department to serve as a mentor, look for someone in the same college. It's a bonus if your mentor is also a woman, but don't count on this, as there are so few senior women in computer science and engineering (and there may be none at your institution).

Don't go out of your way to alienate senior faculty in your department. You don't have to be best friends with everyone in the department. Just remember those senior faculty sit on the various tenure review committees.

## 5. TENURE MODELS

# 5.1 Model 1: Low Expectations

Be aware of what you can expect from your university. MIT, Harvard, Stanford, and some other institutions are universities where a substantial number of very good people do not receive tenure. This is not necessarily wrong or bad; these universities simply use a model in which a relatively small fraction of tenure-track assistant professors are expected to get tenure. They believe this model builds the kind of institution that they want.

Failing to receive tenure at such an institution is not, in itself, a death career breaker. These people who are denied tenure are often promoted at other outstanding universities and do exceptionally well for the rest of their careers. However, this model obviously has some negative impact on the climate for junior faculty. Despite this, there are several excellent reasons to accept a position at such a university. Working at one of these universities might be particularly advantageous if an important person in your field is there.

# 5.2 Model 2: High Expectations

The second model is that each person hired into a tenure-track position is expected to get tenure as long as they meet the requirements of the university. This is a more common model that universities in the United States and Canada follow. The tenure track process is a little shorter—and thus, harder.

#### 6. EPILOGUE

Although keeping track of all these suggestions might seem overwhelming, it is a reasonable task if you start early and stay organized. Get all the help you need—copies of guidelines, advice from your department head and colleagues, etc. Stay positive. The worst thing you can do is think you're doomed to fail from the start. Try to keep some balance in your life. An understanding and supportive partner can be an enormous help. Work hard, maintain a healthy personal life, and you can do it.