Proper Documentation of Collaborative Efforts for the Retention, Tenure, and Promotion Process

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Abstract

There exists a need for junior faculty to clearly document their collaborative efforts with other faculty members and industrial partners in order demonstrate a high level of scholarly activity to a Retention, Tenure and Promotion committee. This paper will present types of documentation that should aid junior faculty in attaining tenure and promotion.

The Problems:

In order to provide a realistic engineering experience to electrical engineering students studying VLSI design and fabrication, two things are needed: outside support (in the form of NSF grants and industrial gifts/donations and collaborative effort to design curriculum.[1,2,3] Some level of industrial support is helpful to purchase equipment or software to actually run a lab. NSF funds can be used for curriculum development and equipment purchases[4] however, NSF proposals that have industrial support are stronger proposals, and thus stand a greater chance of being funded. In addition, proposals (NSF and industrial) that are team based are also considered stronger because the impact will be greater. Equipment donations are not enough to build realistic curriculum. Equipment that is donated in a "dump-and-run" fashion tends to not be used. Manuals for CAD software or test equipment can sometimes be too complex for a student to understand and need to be augmented by faculty. Writing tutorials of this nature is very time intensive; splitting up the work among collaborating faculty can ease this burden.

Even though industrial support and collaborative effort greatly facilitate the ability to develop and maintain VLSI design and fabrication curriculum, many tenure and promotion processes tend to emphasize scholarly activity in the form of publications and grant dollars over teaching activities[5] (such as lab development).

Another problem is some tenure and promotion committees tend to "bean count" first author publications even though some have recognized that this can lead to faculty not collaborating.[6] (Meaning: It is easier to determine if a faculty can publish on his or her own if the publications are all single, or first author publications.) It is also true that some faculty have trouble evaluating group effort.[3] Even though most authors would like to see this changed,[5,6,7] the reality is that you have to prepare your dossier for a worst case situation.

Solutions:

Since it is the junior faculty member's responsibility to make his or her own case for tenure,[7,8] it is vital to prove to tenure and promotion committees, that grants received from industry are scholarly work by properly documenting the granting process at a company.

To document the grant review process at a company, faculty should get letters from the company stating the award and the review process to win an award. The positions of the personnel of the review committee, at the company should be clearly indicated. If possible, it should be stated if the industrial personnel on the review board have credentials, that faculty would recognize. For example, electrical engineering faculty would recognize IEEE senior members or fellows as having the qualifications to be on a grant review board. In reality, this part might prove difficult because there could be sensitive information about company management members. If you find that the process used does not reflect the peer review process, it might be better not to include this information in the dossier and just include the letters of recommendation and grant amounts received.

It has also been reported that junior faculty should receive letters of recommendation from their industrial contacts.[9] Recognizing that industrial contacts may not be familiar with the tenure and promotion process, one has to make sure that the letter supports your case in terms that committee members not familiar with industry can understand.[9] This may sound obvious, but things that are important to company management (for example return on investment) might not be understood by a promotion and tenure board. My own letters of recommendation from Cadence Design Systems, which were very positive, needed to be rewritten (see Table 1). For example, I was rated very high in terms of leadership, responsiveness, and striving for innovation, but these terms did not translate directly into scholarly activity. In my case, it took at least an hour of time with my program manager to understand which concepts were important to her and trying to translate them into the academic categories of service, teaching, and research. In fact, some concepts I could not transform into these categories. This does not mean do not try. The better the documentation presented to the tenure and retention committees, the less anxiety you will feel during the tenure and promotion process.

Another method to strengthen the documentation of your dossier is to clearly indicate your contribution on co-authored journal articles for which you are not the primary author. Contributions could include: writing the grant that allowed the work to be completed, internal review of the paper or generating the idea for the work. As long as the list of your joint publications shows all of the group members taking both primary authorship on some papers and secondary authorship on others, most committees would agree that all authors are strong contributors to the group.

Summary:

Curriculum development in the area of VLSI design and fabrication is expensive in money and time and every source of revenue need to be explored, not just NSF type grants that are easily recognized as scholarly work by retention and promotion committees (The NSF grant review process is well known and intensive.) In order to share the time burden of developing curriculum in this area, faculty need to collaborate. Since industrial grants/gifts and some collaborative efforts are not easily recognized by some tenure and promotion committees, faculty need to document their work thoroughly. The best way to document collaborative work is to demonstrate a body of work in which all team members show that they can take a lead role, and try to make sure industrial letters of support are written in a manner that translate in to scholarly activity. A long term solution to the problem of some faculty not evaluating collaborative or industrial scholarly activity is for those who are engaged in these activities and see their worth, to participate in the retention and promotion process.

Even though this paper tries to offer solutions to the problems created by interacting with industry and collaborating on technical paper, the bottom line is that interacting with industry and fellow faculty is quite rewarding. For instance, when you know people who work in your field in industry, you can use them to make sure that the engineers you produce have the required skills to succeed in industry. In addition, I feel that some of my best ideas and work came from interacting with my fellow faculty members.

Table 1: Translating Industrial concepts to university concepts.

Industry concept	Translation to a university concept
Proximity of your school to company	Hard to translate
Number of students from your program employed by company	Student Impact
Faculty have the interest to do project	Expertise (Faculty already working in the area.)
Faculty have the time to do project	Expertise (Faculty already working in the area.)
Return on investment	Expertise to carry out the grant successfully (Won't waste time/money because faculty has the expertise to carry out the project.)
Leadership ability	Leadership ability
Ability to work in a team	Ability to work in a team
Responsiveness	Hard to translate
US New and World Reports Ratings	Hard to translate

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