

Dual Career Academic Searches for Engineering Faculty Positions

Noel N. Schulz^{*}, Kirk H. Schulz^{*}, Mariesa L. Crow[#], James L. Drewniak[#]
Michigan Technological University^{*}, University of Missouri-Rolla[#]

Introduction

The hiring and transferring of dual career couples is an increasing problem in industry [1-4] and academia. Many dual Ph.D. husband and wife teams seek faculty positions in engineering, and are often hampered by uncertainty in how to go about searching for two tenure track positions. While the approaches for solving the challenges of dual career hires are varied, the issue is becoming more and more a concern. Departments will find dual career issues one of the top concerns for the recruitment and retention of faculty in the next ten to fifteen years. In fact, the issue is now rising beyond faculty hiring into the searches for department chairs, deans, vice presidents and presidents [5].

In order to gain some insight into attributes of successful dual career searches, a survey was sent to dual career couples at universities in the United States where both spouses were placed into tenure track faculty positions. Unfortunately, no data base of dual engineering faculty couples exists, and thus, the list was assembled from personal contacts and suggestions made by colleagues to the authors. Additionally, administrators ranging from department chairs to the academic vice president were interviewed at the University of Missouri-Rolla (UMR) and Michigan Technological University (MTU) to gain their insights into hiring dual career faculty couples. We believe that the information presented may be helpful to dual Ph.D. engineering couples seeking faculty positions and to administrators hoping to attract dual career couples.

Dual Career Engineering Faculty Search Survey

A survey was sent to 74 different faculty members representing 37 dual career couples and 18 responses were received giving a return rate of 49%. Each survey contained the responses for both faculty members in the couple. A copy of the survey and the detailed results are being prepared for publication in the *Journal of Engineering Education* [6]. The survey asked some initial information about the couples' current university appointments and length of time there. The rest of the survey dealt with the strategies or activities the couple used in their search. Specific questions related to:

- importance of university location and reputation,
- at what point prior to their desired start date did they begin their dual career search,
- how and when in the search process they indicated they were part of a dual career couple,
- what people at the university were instrumental in working out two positions,
- what institutional dual career programs were available,
- how many individual and dual tenure track offers did the couple get,
- how important was a spousal position in your decision to accept or reject an offer,
- whether one person left a tenure track position at another university because of an unsuitable dual career situation,
- and if one of the spouses was in a temporary (or non-tenure track) position prior to getting two tenure track positions.



There were also three open ended questions on the positive experiences, negative experiences and other suggestions about the dual career search. A summary of these results follows.

Written Comments

First, many universities publicize that they are attentive to the needs of “dual career” couples, or have “informal” dual career programs. Respondents felt that most of these programs had little or no significant financial or faculty support. Three universities were reported to have formalized dual career plans in place (Pennsylvania State University, University of Alaska-Fairbanks, University of Nebraska-Lincoln). Nebraska’s program is very formalized [7], and has a permanent staff which works to see that resources are given to aid a spouse if a faculty position is not immediately available. Second, the internal communication structure in many universities was reported to be poor, where departments in the same building at times did not talk and coordinate their recruitment and hiring efforts. Third, some flexibility in hiring is often required by departments. Often, partner 1 may be the top candidate, while partner 2 is the second candidate in their department, and thus some flexibility in ‘short-list’, ‘acceptable, but not first’, and ‘top-candidate’ may need to occur in order to hire both spouses. Fourth, many couples noted that universities would stop considering them when it was apparent that a spousal position might not be available, even if the couple might still be interested in the university. They also felt that if they revealed too early in the process that they were part of a dual career couple, some faculty would treat that as a negative for the candidate's application and they would no longer be considered.

Tabulated Survey Results

Timing is a key issue in a dual career search. There was considerable variation reported in the surveys for when dual career faculty couples initiated their job search. Twenty-eight percent of the respondents started their search 18 months before their desired start date, 39% started 12 months early, and the remainder (33%) started 6-9 months before their start date. Another key timing issue was when to notify your department that you were part of a dual career couple. Fifty three percent of the respondents said they sometimes indicated they were part of a dual career couple in their application packet, while 11 % never indicated they were part of a dual career couple in their packet. Those that did not indicate they were part of a dual career couple in their application waited until initially contacted by the department (70%), on their interview trip (20%) or after an offer was made (10%) to tell the department of their partner's desire for an academic position. Another issue was where to apply. A large percentage of the respondents (83%) applied to universities where there was only one position advertised.

While partners in a dual career couples might have had as many as two or three individual offers, the average number of tenure track dual career offers made was **one**. In ranking the importance of a spousal position on what offers to accept:

- 41% would not consider an institutional offer without a tenure track spousal position.
- 12% would not consider an institutional offer without a permanent spousal position.
- 6% would not consider an institutional offer without a temporary spousal position.
- 41% reported that a spousal position was "a key factor in the final decision process".
- 0% reported that a spousal position was "one of several factors in the final decision process".
- 0% reported that a spousal position "made no difference in the decision process".



The fact that 59% of the respondents replied that they would not consider an institutional offer without at least a temporary spousal position suggests that universities cannot take a stand that they will "just let the dual career couple work it out". Survey results also indicated that the administrator having the most influence in working out two tenure track positions was the department chair.

Dual career hiring is not only a recruitment issue but it is also a retention issue. In almost half of the couples (44%) that responded to the survey, one of the partners left a tenured or tenure track position at one university to go to a position at another university because of dual career issues. While in one or two cases there were offers for the other partner at the first university, most often the lack of a position for the partner (and quite often lack of cooperation from the department or departments involved) caused the settled faculty member to leave his or her tenured or tenure track position. In at least three cases, the faculty members took large NSF grants (PVI, NYI, CAREER awards) and active research programs with them to their new university.

Summary of Interviews with Administrators

MTU and UMR are located in small towns with few large employers outside the university environment. Both universities have had a recent history of dual career hires although there is no formal dual career program. In fact, during the fall of 1995, six new engineering faculty at MTU were part of three dual career couples including two couples with partners within the same department and one couple with partners in different departments. Four administrators were interviewed (two at each university) to gain insight into the perspective of the university as dual career couples send in their applications. Below is a list of common thoughts and suggestions on dual career hires obtained from the interviews.

All the administrators agreed that dual career hires within a department were easier than if two departments or even two colleges were involved. However, it was mentioned that hiring two faculty with the same research area within the same department may be a problem. At the level of dean or provost, administrators mentioned that they sometimes have resources available to fund a spousal position if one is not available and the spouse is deemed acceptable by their respective department. However, they feel each dual career case is often unique in its needs and it is hard to make an overall policy on dual career hiring. They also felt that an effort by universities to hire more underrepresented faculty such as minorities and women had fostered an increase in the number of dual career hires.

A big issue for a dual career couple is knowing when to notify your department that you are part of a dual career couple. Administrators warn couples not to do this too early as it may be seen as a negative for your application. They vary on their response as to when partners should notify an institution they are part of a dual career couple. Some administrators and faculty do not want to know until they have given you an offer that you are part of a dual career couple. They would like both partners to rise to the top of the faculty candidate list regardless of their relationship. However, if partner 1 waits until a verbal or written offer is tendered, it is often too late for the university to coordinate the hiring process for partner 2. Additionally if the partners are in two different departments, the hiring process may be on a different time table and a decision on an offer might have to be made for partner 1 before partner 2 receives adequate feedback. Other administrators recommend that you let the university know once they have expressed interest in you such as when first notified you are on the short list or at your on-campus interview. This gives your department a chance to work with the administration on a position for the second partner. All administrators noted that both partners must be competitive for the needs of his or her department or the dual career offer will not work out.



Administrators disagree on the amount of "pressure" faculty from other departments or administrators should exert to encourage another department to hire a spouse or partner. Some department chairs and faculty resent any external encouragement and see such pressure as an intrusion into the department's own hiring process. However, other administrators look at the overall contributions the couple may make to the entire college rather than just their individual departments. They may encourage departments to consider partners who have made a short list and are deemed acceptable, even if they are not the number one choice. Eventually the department needs to accept the partner. If the partner is seen as forced departmental hire, it can lead to hard feelings from the start of a faculty career that may hamper the long term success of the faculty member at the university.

In a competitive market where some schools receive hundreds of applications for a faculty position, it may seem that it would be unnecessary to deal with dual career hiring. Administrators at Michigan Tech have found that dual career hires add stability to the faculty. Two faculty members are less likely to work out the details of transferring universities so the couple tends to remain at the school. Additionally dual career couples seem to be happier with their situation when both partners have satisfactory jobs and thus there is less chance of relocation to another more desirable situation.

Summary

This paper has provided some insight into the issues of dual career engineering hires from the point of view of administrators and dual career couples who have successfully found two tenure track faculty positions. Timing with the dual career search is probably the biggest factor. This includes the applicant notifying the department that they are part of a dual career couple and the ability of the university to work out two positions. As indicated by the survey, if universities expect to hire one of the dual career couple, they must be prepared to hire both. Another key outcome is that departments and administrators at universities must be flexible and have open communication to enable dual career hiring.

Acknowledgments

The authors would like to thank Dr. Fred Dobney, Provost and Executive Vice President, MTU, Dr. Ed Fisher, Interim Dean for the College of Engineering, MTU, Dr. Robert Mitchell, Dean of Engineering, UMR, and Dr. Keith Stanek, Chair of Electrical Engineering, UMR, for their comments and suggestions relating to the topic. We would also like to thank the many dual career couples that responded to the survey and provided additional information on the positive and negative parts of their dual career faculty search.

Bibliography

1. J.B. Panos, "Relocating as a Dual Career Couple", *Chemical Engineering Progress*, January, 1995, 74-78.
2. J.S. Lublin, "As More Men Become 'Trailing Spouses', Firms Help Them Cope", *The Wall Street Journal*, April 13, 1993, p. A1.
3. C.B. Hendricks, "Approaching the Dual Career Couple Issue in Industry", *Younger Chemists Committee Newsletter*, American Chemical Society, Spring 1996, p. 5-6.



4. J.B. Panos, "Relocating the Dual Career Couple", *U.S. Women Engineer*, May/June 1992, p. 37.
5. "In Box", *The Chronicle of Higher Education*, March 15, 1996, p. A19.
6. N.N. Schulz, K.H. Schulz, M.L. Crow and J.L. Drewniak, "Dual Career Hiring Issues: Myths and Reality", *Journal of Engineering Education*, to be submitted.
7. The address for the University of Nebraska-Lincoln Dual Career Program office is: Coordinator, Dual Career Program, University of Nebraska-Lincoln, P.O. Box 880420, 208 Administration Building, Lincoln, NE 68588-0420. Phone: 402-472-9434.

NOEL N. SCHULZ received her B.S.E.E. (Summa Cum Laude) and M.S.E.E. degrees from Virginia Polytechnic Institute and State University in 1988 and 1990, respectively. She received her Ph.D. in Electrical Engineering from the University of Minnesota in 1995, and is currently an Assistant Professor of Electrical Engineering at Michigan Technological University. She has prior teaching experience at Virginia Tech and the University of North Dakota. Her research interests are in computer applications in power system operations including artificial intelligence techniques. She has been active in the New Engineering Educators Division of ASEE and the Power Engineering Society of IEEE. Professor Schulz is a member of Eta Kappa Nu, Tau Beta Pi, and was a recipient of an Edison Electric Institute Forgiveable Loan Ph.D. Fellowship.

KIRK H. SCHULZ received his B.S. and his Ph.D. degrees in Chemical Engineering from Tech in 1986 and 1991, respectively. After finishing his Ph.D, he was an Assistant Professor of Chemical Engineering at the University of North Dakota from 1991 to 1995, and is currently an Assistant Professor of Chemical Engineering at Michigan Technological University. His research interests are focused in environmental catalysis and surface science. He has been very active in both the New Engineering Educators (NEE) and Chemical Engineering Divisions of ASEE, and is the immediate past Chair of NEE. Professor Schulz received a 1995 DOW-ASEE Outstanding Young Faculty Award, and is a recipient of a National Science Foundation CAREER Award.

MARIESA L. CROW received her B.S.E. in electrical engineering from the University of Michigan in 1985, her M.S. in electrical engineering from the University of Illinois in 1986, and her Ph.D. in electrical engineering in the area of Power and Energy Systems from the University of Illinois in 1989. She is currently an assistant professor of Electrical Engineering at the University of Missouri in Rolla. Her primary area of research interest is computational algorithms, simulation, and analysis of power system dynamics. She is very active in the Power Engineering Society of the IEEE and is a 1992 recipient of the National Science Foundation Young Investigator Award.

JAMES L. DREWNIK received B.S. (highest honors), M.S. and Ph.D. degrees in electrical engineering from the University of Illinois, Urbana-Champaign in 1985, 1987, and 1991, respectively. He was the recipient of several graduate fellowships and awards at the University of Illinois, and pursued graduate studies in wave propagation and interactions in the areas of electromagnetics, antennas, microwaves, and acoustics. In 1991, he joined the Electrical Engineering Department at the University of Missouri-Rolla as an assistant professor. His research interests include the development and application of numerical methods for investigating electromagnetic compatibility problems, antenna analysis, and modeling of microwave components, as well as experimental studies in antenna and electromagnetic compatibility problems. Dr. Drewniak is a member of the IEEE, an associate editor for the Applied Computational Electromagnetics Society Newsletter, and is also a member of Eta Kappa Nu, Tau Beta Pi, Sigma Xi, and Phi Kappa Phi.

