

## **Solving the Two-Body/Dual-Career Problem**

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**AMS-MAA-SIAM Joint Committee on Employment Opportunities**

Over the past generation, what is known as the Two-Body Problem has arisen as an important concern for a number of mathematicians seeking employment. The problem to solve is for a pair of professionals, married or otherwise, to find employment that fits their education and interests, and to work sufficiently near each other so that they can live together in one home. The purpose of this article is to report on known solutions to this problem, followed by a discussion of strategies that a couple can follow to increase their chances of success. This article is written primarily for couples in which at least one has, or will soon have, a Ph.D. in Mathematics.

For couples who both have Ph.D.'s in Mathematics, there are several possible outcomes. If both desire academic employment, then the pair may seek to both be hired by the same school into two separate tenure-track positions, and this has happened many times around the country. In sufficiently large communities, it is possible that two nearby schools will each hire one of the couple.

There are some less desirable options, too. There are many cases of one member of an academic couple being hired into a tenure-track position, while the other member is hired in a visiting or temporary position with the hope of getting on the tenure-track the following year or two. Some couples have been successful in this process, while others have not. In addition, certain schools have entertained the idea of an academic couple "sharing" one tenure-track position. Although the details of such a position will vary, in one implementation, each member of the couple basically works half-time.

Depending on the state of the economy, there are temporary solutions that can also be considered, such as one member of the couple working full-time while the other works part-time, or even perhaps as an unpaid member of a research institute. Temporary solutions are not very attractive, but they may at least provide the opportunity to add publications and/or teaching experience to vitas. It is important, though, for a couple to recognize whether what they are doing is temporary or not.

Of course, other than the "sharing" example, the rest of the possibilities above also apply if one of the couple has a Ph.D. in a different subject, or doesn't have a doctorate. Also, earning a Ph.D. does not automatically imply a desire to work in academia. One or both members of a Ph.D. couple can gain employment in industry, instead. It is even possible for one member of the duo to be hired as a faculty member at a school, while the other is also hired at the school in a different role, such as in student services.

Given all these possible outcomes, what advice can be given to a couple endeavoring to solve the Two Body Problem? Some of the following ideas may seem obvious, others not so much so.

Before beginning your job searches, it is important to talk together about your priorities when it comes to kinds of jobs and places to live. For instance, it will be easier to find two jobs in an area with a larger population, simply because there will be more jobs available. The strategy you develop to find two jobs in a metropolitan area will be different than the strategy in a rural area. In addition, there needs to be an understanding of how flexible each member of the couple will be with career plans. Being more flexible will make it easier for both to find employment.

In the situation where an employer the couple is interested in is trying to fill two or more positions, a key question is whether or not to tell a prospective employer that you are trying to solve the Two Body Problem. It is legitimate to be concerned that revealing this information will affect how you are perceived, because there are search committees that will lose interest in you if they learn about your situation, even though that is illegal. It is probably best to inform a search committee of the situation if that committee begins to show interest in one or both candidates. A forward-looking committee or department chair may start to explore ways to help you solve the Two Body Problem in a way that will also be to the advantage of the department. Employers want to retain talented employees and know that an unemployed spouse can be an important issue for a couple. On the other hand, if a department is uncomfortable with the situation, better for you to know that earlier than later.

Related to this, it is important to find out how many positions an employer is trying to fill, to determine if there are one or more openings. Sometimes that will be clear in the advertisement, but, if not, find a way to get this information, perhaps by contacting a secretary or staff member.

In addition, you are not supposed to be asked about marital status in interviews, although you can offer such information to prospective employers. It is a gamble on how this information is used, but at some point in the process, you will probably need to tell a prospective employer about the situation. The reason for this is at certain schools, there is extra scrutiny by the administration before two offers are made to a married couple, to be certain that the decisions are being made based on merit. It is critical that a search committee becomes aware that they are interviewing a married couple at some point before offers are made.

This extra scrutiny may also come into play if a couple is seeking to become faculty in two different departments at the same school. At the same time, if there have been on-campus interview and prospects seem bright, this could work to your advantage as you may have now two department chairs working on your behalf. In this case, it is important to share your situation with the department chairs of those two schools. If those departments want to hire you, those department chairs will most likely work with their Dean or Deans to coordinate the two job offers.

Academic searches take a long time, while non-academic searches typically do not. In academic searches, an advertisement might be placed in August or September, followed by on-campus interviews in December, January, February, or later. Employment doesn't

begin until the following August. For non-academic searches, the time from advertisement to employment is much shorter. So, if one member of the couple is seeking non-academic employment, he or she should probably hold off on applying until the other member's situation has been set. In addition, many schools will make their Career Services office available to a spouse of a new employee.

Same-sex couples have other issues to consider, such as the variation in marriage laws from state to state, and the availability of benefits to same-sex couples. If concerned about asking these questions of a search committee, consider contacting the human resource office directly for a confidential discussion of those issues.

Although this may work better for established researchers, consider pitching yourself to employers as a team. Teams of researchers (not related by marriage) have been successful with this strategy.

Finally, it is important to say that some couples don't want to work in the same department, and that's fine.

The quantity of advice and information for the Two Body Problem has grown significantly over the past decade, and in fact several other articles on this subject have been published recently. Links to those articles, which include real stories about couples who have solved the Two Body Problem, can be found below. You can also find examples on the Internet by searching "two body problem jobs". Many schools make their employment policies available publicly on the Internet, and some schools have specific policies as it pertains to dual-career couples. Included below is a link to an example is from the University of Wisconsin.

***Internet Links:***

Dual Science Career Couples Page	<a href="http://www.physics.wm.edu/dualcareer.html">www.physics.wm.edu/dualcareer.html</a>
Dual Academic Career Job Search Engine	<a href="http://www.insidehighered.com/career/seekers">www.insidehighered.com/career/seekers</a>
Two-Body Problem Articles	<a href="http://www.phds.org/jobs/the-two-body-problem/">www.phds.org/jobs/the-two-body-problem/</a>
Association for Computing Machinery article	<a href="http://www.sigmod.org/record/issues/0306/D9-C2.two-body.pdf">www.sigmod.org/record/issues/0306/D9-C2.two-body.pdf</a>
University of Wisconsin policy	<a href="http://research.med.wisc.edu/frfp/checklist/checklist.html">research.med.wisc.edu/frfp/checklist/checklist.html</a>
Dual Career Couples: What Universities Need to Know	<a href="http://www.stanford.edu/group/gender/ResearchPrograms/DualCareer/DualCareerFinal.pdf">www.stanford.edu/group/gender/ResearchPrograms/DualCareer/DualCareerFinal.pdf</a>
A Celebration of women in Mathematics at MIT ( <i>Notices</i> , January 2009)	<a href="http://www.ams.org/notices/200901/tx090100042p.pdf">www.ams.org/notices/200901/tx090100042p.pdf</a>
Ask Professor Nescio, June/July 2009	<a href="http://www.ams.org/notices/200906/rtx090600732p.pdf">www.ams.org/notices/200906/rtx090600732p.pdf</a>

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