

Getting a Job

Introduction

One of the most pressing concerns of young students nearing graduation is obtaining a first job, position or fellowship. These notes are purely a guide and offer no guarantee of success. They are based on experience with a large number of students at various levels. There are many different types of jobs a student might aspire to and we shall consider several categories. In some cases a student will wish to pursue a career directly related to his/her training, in other cases a career may be taken up in some completely different field. The key is to be flexible and willing to think through the various possible options. The range of possible careers can be much larger than at first thought. The choice of a career is one of the most important choices in life as it will probably determine a significant part of your life. The range of careers open to people is greater than ever before so spend time exploring the many possibilities and don't become too narrowly focussed. Satisfaction in your career is probably more significant than simply the accumulation of wealth. While the range of possible careers is very large the competition for specific jobs can be fierce. Such competition is likely to become stronger than weaker with increasing time.

Academic Careers

Academic careers are amongst the most competitive and should only be considered if you have a deep interest in teaching and research and are prepared to work very hard to achieve success. No longer can a student aspire to a tenured position in academia without hardwork and certainly must have a willingness to work longer than the traditional 40hours/week. Academic jobs are generally internationally competitive. While the full impact of international competitiveness has yet to reach Poland expect it to within the next decade. This means that to gain an academic job you will need to be on par with the best the world has to offer. Nevertheless top achievers will obtain success. The economic rewards may not be as great as many jobs in the private sector job satisfaction can often be greater. How much so is up to you.

An absolute minimal qualification to compete for an academic job is a Ph.D. in your subject specialisation, at least two years of post-doctoral experience and demonstrated ability in some field of research. Simply having a Ph.D. is not enough. Of far greater significance is what you achieved in your thesis as demonstrated by publication of significant research and even more importantly how you have developed after completion of your Ph.D. Have you been able to demonstrate originality, think up and develop your own research ideas? Do you demonstrate creativity? If not then you are unlikely to succeed and would be well advised to think of a different career. You should consider broadening your experience by taking a post-doctoral position well outside that of your graduating university.

If you aim for an academic career and have completed your Ph.D you will need to pay careful attention to obtaining a post-doctoral position. In general try to obtain such a position in an outstanding institution where you will have the opportunity to develop and enhance your experience.

Teaching Careers

There is a considerable need in most countries for more highly trained and experience persons to enter the teaching profession in schools and in teacher training colleges. There is a great need for people dedicated to improving the quality of education and to inspire the next generation of students. The economic rewards may not be great but the possibilities of job satisfaction can be considerable.

Medical Physics Careers

The increasing level of technological sophistication of many hospitals is creating a demand for adaptable physicists who can manage equipment, measure and process data, do original research etc.

Applied Physics Careers

The widest range of careers open to physics graduates are to be found in applied physics in areas such as creation and maintenance of standards, telecommunications, defence (I prefer not to be involved in this area) and in an enormous range of industrial applications such as occur in textiles, paper manufacture, steel making, electronics, image processing, construction, food industry, computers, software design, agricultural research etc., etc. Such careers exist both in the private and state sectors.

Non-Physics Careers

A training in physics can be a jumping off point for many other careers. Physicists usually have well above average problem solving skills which can be valuable in many other areas. Significant numbers of physics trained persons have found careers in seemingly unlikely areas such as finance, computer management, railway management etc. The opportunities are there for those willing to try something different.

Finding Out about Jobs

Information about available jobs and fellowships appears in many places. Several netscape sites carry information.

1. <http://www.nature.com/>
All jobs in international science advertised in *Nature* are listed here.
2. <http://www.iop.org/>
All jobs advertised in *Physics World* are listed here. Also available by e-mail subscription (free).
3. <http://hq.aps.org/jobs/jobs.html>
American Institute of Physics. Has much information on physics careers, job listings etc. The Department Chairs Conference has much good information on job prospects etc.
4. <http://www.ams.org/>
American Mathematical Society. Probably the best source of information on applying for jobs. The document *Seeking Employment in the Mathematical Sciences* is really outstanding and equally relevant to physicists. See also *Bucking the Trend: Landing a Math Job in a Tight Market* - excellent advice.

Hunt around and you'll be surprised what is available. Newspapers (e.g. *Times Higher Education Supplement*) list jobs as do journals such as *Physics Today*. Don't expect jobs to come to you without a real effort on your part. Don't wait for jobs to be advertised - seek out potential employers and contact them. Read the articles *Seeking Employment in the Mathematical Sciences* and *Bucking the Trend: Landing a Math Job in a Tight Market*. It is difficult to give better advice than is contained in those two articles! Therein you will find excellent guidance on such topics as: Applying for a position, Personal contacts, Academic and Nonacademic positions, Interviewing, Letters of Introduction, Letters of Recommendation etc.