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Centrifugal pumps

Will Georgetown University teach about centrifugal pumps? (*The Industrial Physicist*, October 2000, pp. 24–25). Students should learn about centrifugal pumps because some physicists from other schools believe there is no centrifugal force. Centrifugal pumps are important in industry.

James F. Jackson
Carlisle, Indiana

[*Author replies:* I am happy to see your interest in the new graduate program that we have launched at Georgetown University. Indeed, many different subjects are important for working in industry, and a poll of a dozen industrial physicists would likely yield over a dozen different fields that every student “must” learn in graduate school. We designed the graduate program at Georgetown to teach basic physics problem-solving skills along with the people skills that are so vital in the private sector. Such a strategy omits some traditional subjects in order to cover this nontraditional material and still maintain a reasonable time to degree.

In our program, we do not offer a conventional course in classical dynamics, which would cover the physics behind the centrifugal pumps that you discuss (we do offer a course in kinetic theory that will focus on new ideas from nonlinear dynamics and granular systems, which touches on some of these concepts). But our students will automatically be exposed to this particular

material through their teaching duties, which entail laboratories and tutorials in the first-year undergraduate physics curriculum, including distinguishing between the centripetal force in an inertial frame and the centrifugal force used to describe situations in rotating frames. As you well know, this is a subject that often is misunderstood, even by professionals.

Jim Freericks]

I recently read your article, “Georgetown Answers Industry’s Call,” in the October issue. I work for Raytheon in McKinney, Texas, and I have had the wonderful opportunity of working for eight years with the Jet Propulsion Laboratory. The article was very timely because I am trying to find a physics position in the Washington, D.C., area. I wish to ask your advice on how to identify companies that value the work of physicists. I consider myself a physicist with experience in nonlinear optics, Fourier optics, adaptive optics used for wavefront compensation, and multiprocessor computation and simulation work.

Karl K. Klett, Jr.
Raytheon Systems Co.
McKinney, Texas

[*Author replies:* I thank you for your interest in the graduate program and our local industrial partners. Unfortunately, I don’t have a list of potential employers to give you, but I do



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have the following suggestions. Within the greater D.C. area, a large number of defense-related research laboratories work in your area of interest (including the Naval Research Laboratory, the Naval Surface Weapons Research Center, the Army Research Laboratory, etc.), as do other government laboratories (such as the National Institute of Standards and Technology and the U.S. Patent Office).

There is a list of the top physics employers in the country compiled by the American Institute of Physics, which is available with hyperlinks to the companies from our Web site at http://www.physics.georgetown.edu/grad_large_employ.htm.

The local companies that hire large numbers of physicists that I know in the Washington area include SAIC, Orbital Space Sciences, Neocera, and Northrop Grumman. A good place to begin targeting other companies in the area is the local high-technology councils, whose Web sites are grouped together at http://www.physics.georgetown.edu/grad_hitech.htm. I hope this helps you with your job search.

Jim Freericks]

[You can also look among job listings at www.tipmagazine.com (Job Ads)—*Ed.*]

Trade secret

I wish to point out what I believe is an error in the August issue concerning “Do You Need to Patent It?” (p. 26). I’m fairly certain that the formula for Coca-Cola is not patented. It is protected only by trademark law. If indeed it were patented, it would have been public knowledge long ago. As a matter of fact, there are numerous sources now that give the original formula, many of which are on the Web.

Name withheld by request

R&S Coverings

Tustin, California

[*Author replies:* The Coca-Cola formula has indeed been protected as an unpatented trade secret. The sentence in question tried to contrast it to inventions that cannot be kept secret and would be better protected by a patent.

William Borchard] 