

## Memo from the Chair

In addition to the many activities that we all go through at the end of the year, as chair of the UMR physics department I get to record my reflections on the past year, and my hopes for the next, in this section of the department's annual newsletter. It is one of the aspects of the job I really enjoy, since it offers me the opportunity to postpone dealing with the next "Crisis du Jour," meeting the next administrative deadline, or responding to requests for information from "above." Instead, it allows me to reflect on how well the department functions in general, and how well it is carrying out its missions in education, research, and service. It is a chance to observe how, in spite of enormous challenges that face UMR, and higher education in general, the UMR physics department is well-positioned to meet those challenges, to take advantages of the opportunities that accompany them, and to increase the scope and quality of its many activities.

In the "challenges" department, no one who is interested in higher education these days can be unaware of the deleterious effect that the economic downturn of the last two years has had on state budgets throughout the country, and on the budgets of most state-supported universities. UMR is no exception, with the amount of money received from the state of Missouri down considerably over the past several years. No one likes budget cuts, but it is my view that the university is responding to the current fiscal situation in a positive way that, as long as budgets do not *continue* to decline, will ultimately increase its efficiency, competitiveness, as well as its standing throughout the country.

For example, the campus has undertaken an intense examination of all its degree programs, in an attempt to identify those which do not seem to attract sufficient majors, and consequently are unable to "support themselves." Those readers living in Missouri may have read in the news about the so-called "Program Viability Audits" being conducted on each of the four UM campuses, and noticed with concern that the UMR Physics B.S. and M.S. degree programs *were* on the initial list of 12 UMR programs being considered for review. I received a call one morning from UMR physics alum **Greg Upchurch** (BS '72 MS EE '85) who had just read an article listing the programs being considered. "Paul," Greg asked, "am I about to become an alumnus of a no-longer existing department?" I assured Greg, as I had been assured myself, that there was no way that Missouri's Technological University would *not* have a vital, active physics department, and that we would certainly be granting physics degrees long into the future.

In a few short weeks (that seemed long at the time), the Physics degree programs were removed from the list of programs slated for review; a move that many felt could have been made much earlier, given that UMR produces more BS physics degrees than any other UM campus, and leads the state in the preparation of physics majors going into high school teaching. Numbers aside, the *quality* of the physics degree

earned by our majors is competitive with the best in the country, as evidenced by the high starting salaries of our majors, and the graduate schools to which our majors get admitted every year. Last year we had physics majors admitted to the graduate programs at University of Pennsylvania, UCLA, University of Illinois-UC, and Washington University.



So, yes, the campus is going through hard financial times. Yes, the portion of the department's operating budget coming from the state has been reduced; but we are finding creative ways to cover the budget shortfall without sacrificing the quality of the education that we provide, and without hampering our faculty's ability to carry out and involve our undergraduate and graduate students in cutting-edge scientific research. In fact, the total operating budget of the department has actually increased over the last two years. In part this is due to new research grants and contracts, notably Phil Whitefield and Don Hagen's new \$3.15M NASA grant to set up a Center of Excellence for Aerospace Propulsion Particulate Emissions Research (see the article on page 8 of this issue).

But another important factor is the increased generosity of UMR physics alumni. Last year's phonathon set an all-time high, as alumni from around the country pitched in to help provide money for scholarships for UMR physics majors. The highlight of the fundraiser was the simple note from UMR Physics alum Dr. **Robert Hufft** (MS '64): "Dear Paul, Please use this in any way the department sees fit." Enclosed was a check for \$10,000. I am pleased to report that we have been using this generous donation to provide special **Robert Hufft** scholarships to recruit the best freshman class we can, and to thereby increase the number of majors in the department. I am sure that with the continued support of its alumni, and a lot of hard work by the students, faculty, and staff, the department will continue to grow, to do great things, and continue to produce alumni able to participate in the challenges of the current century.

On a final note, like many of our readers, I will be observing events in the department from afar for the next eight months, since I will be taking a sabbatical during which I will focus on my research program in theoretical condensed matter physics. Part of the time I will be at the University of New Mexico, where I maintain collaborations in the field of charge transport in organic electronic materials, and part of the time I will be in northern France, at the University of Lille, where I will be working on what are for me, interesting new theoretical problems involving classical and quantum chaos. During my absence, Curators' Professor **Don Madison** will be serving as interim chair. I would like to thank Don for taking on the chairman's hat in my absence. I know that under Don's leadership the department will be in good hands, and I look forward to returning to the Chair's position in September. - Paul E. Parris