

## Department of Fire Protection Engineering Spring 2005 Newsletter

Springtime again... I look at it as a time of promise, a time to consider what we have achieved and to imagine what is yet to be attained. Challenges and opportunities are ahead: the half century mark, a novel accreditation, a round of scrutiny.

By the end of spring two years from now the Department enters its next fifty years. This is indeed a celebration of your accomplishments. It is a fine opportunity for coming together and dreaming of what will be in the next half century. We should all be part of this dream; we should all be part of making it happen.

The new ABET accreditation is challenging and exciting for me and the other faculty in the Department. We are tasked to measure how well our students learn rather than how well we teach. It forces us to learn a new point of view because it shifts the focus from us to our students. Our close relations with the alumni and with the profession provide us with unique opportunities. Your generous support through the curriculum advisory committees plays a tremendous role in this new process.

The state budgetary constraints leave little room for inefficiencies. The University is reviewing small units with an eye toward consolidating and improving resource utilization. The Department of Fire Protection Engineering is well positioned to take advantage of this opportunity. We can make an outstanding case for growth and we should leverage the outcome of this review process to increase our size and impact within the college.

Springtime again... what we have achieved.

- My special hero this spring is Jim Milke. He has turned around the undergraduate enrollment and is well on his way to doubling the number of students in the program over a period of two years. Several initiatives are underway to make this happen. We are conducting a survey to figure out which of these activities are contributing most significantly to this unbelievable success. Our main strategy is to maintain single sections in the junior and senior years. The faculty is fully committed to providing an excellent learning experience for our students. This has resulted over the years in an exceptionally low attrition rate. Therefore, the single section strategy caps the overall program enrollment at about 120 students. At this writing, I am proud to report that the enrollment is already at 100 registered students. I had dreamed to reach this target in fall 2005. This means that Jim can indeed do miracles.
- Research growth has been breathtaking. In terms of awards received, we started in fiscal 2001 with \$388,038, then \$716,573 in 2002 and up to \$1,382,358 in 2003. This means that we almost doubled our research input each year. In the first half of fiscal 2004 (July 2003 – December 2003) we have received \$486,886 versus \$389,233 for the same period last year resulting in an additional increase of 25 percent. These tremendous growth indicators will be reflected in our research expenditures in the near future as the research projects are implemented.
- We have talked about establishing a new Center for Firefighter Safety Research and Development (CFSR&D). This is a major initiative for the Department and for the University. Together with the Maryland Fire and Rescue Institute (MFRI) we are making headway towards securing funding for the Center. The vision is almost overwhelming: the Fire Protection Engineering Department will be the portal connecting the vibrant research community of the A. James Clark School of Engineering and of UM at-large with the fire service through MFRI. This effort could lead to the transformation of the Fire Service and may impact and broaden the activities of the future fire protection engineers.
- This is an exciting time for us! We are searching for another faculty member to start in the fall of this year. Dr. Quintiere is leading the search committee in this endeavor. A number of talented young applicants have been interviewed and we are about to finalize our selection at this time. We have an excellent starting package and facilities ready for our new Assistant Professor and we will make sure that he or she will have the best opportunity to blossom and become highly productive in teaching and research.

Springtime again ... what we must achieve.

A fair assessment of the Department requires that we also look at those areas that are not yet at the level of excellence we aspire. Three elements need our attention:

- Our research funding is not yet at the level consistent with being major players in the college. The progress has been phenomenal, but the absolute value of research dollars spent each year is still lagging. I am confident that with the tremendous momentum toward this goal, we will soon achieve major results.
- We have not yet transferred the extraordinary advances in technology into the research and the practice of fire protection engineering. To gain our place within the engineering disciplines and among the other professional engineering societies, we must participate in the greatest accomplishments of the information age. We are committed to make this happen. The CFSR&D provides a tremendous opportunity for bringing novel technologies to fire applications.
- Finally, we need to stake out our claim in the post 9/11 era. We have been timid so far in our aspirations. It is time to contribute our skills and knowledge to the society in these difficult times. Fire is the great amplifier of terror. In order to inflict major damage to an open society, fire and biological dispersions are the most vicious tools. We need to use our knowledge of fire dynamics and fire hazard assessment to instruct and assist the society in preparing and defending against terror in the most efficient and effective ways. We must be influential in avoiding flawed priorities to be adopted and in evaluating and protecting from the fire hazards associated with terror. This is an opportunity that we have yet to seize at its fullest.

We need to move from unique to stellar. Yes, we are unique. Yes we have great traditions. We are on the verge of our 50th anniversary. This is our launch pad for the next half century. Maybe it is difficult to imagine where we want to be then. Therefore, let me try to dream where we should at least be ten years from now:

- We would like to graduate 40+ undergraduates every year. We would like to graduate 20 Masters of Science and at least 30 Masters of Engineering through our distance program annually. A handful of Doctoral students should graduate each year. In total 100 student students per year should leave the program and join in the workforce.
- The FIRE center should continue to grow and exceed \$250,000 in student fellowships and scholarships to fuel our graduation goals. Research should double twice again to provide support graduate level research.
- The CFR&D must become a vibrant reality. Our accomplishments should be reflected in the practices of the Fire Service. With MFRI we can become a landmark of innovation in advancing firefighter safety.

This is a tall bill. The faculty and adjunct faculty will need to almost double to achieve these lofty goals. And lofty they must be since there is little consolation in dreaming modest dreams. In sharing my thoughts with the Dean of the Clark School, we discussed ways to initiate and support this vision. As you know, major renovations are underway in the capital investments of the college with the construction of the Kim Building and with the renovation of the Chemical and Materials Engineering Building. In reorganizing the space allocations for the various units, the Dean has identified a major opportunity for Fire Protection Engineering: a full floor of the J.M. Patterson building which will become available within a year.

We now stretch over three buildings with a total of 5,700 square feet of space including offices, labs, and student facilities. The third floor of J.M. Patterson would give us almost 10,000 square feet of space at one location on one single floor. In addition to our space, the floor also includes two hi-tech classrooms and a lecture hall for a total of 17,700 square feet. It has been a month since we have discussed this idea. It is hard for me to spend a day without dreaming about celebrating with all of you the 50th anniversary of the Fire Protection Engineering Department in that space!

I am looking forward to our dinner in Salt Lake City. Rest assured that I will have the floor plans with me... See you there with dreams of springtime, Marino