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Dear Friend :

As this academic year comes to an end, we have a number of news items to share with you.

Because of Dr. Christensen's departure, this year was very challenging for us. We did not cancel any of the classes supporting the physics major and at the same time were running the search to replace Dr. Christensen. It was a long and complicated process. Apparently the physics job market was very competitive this year and we were somewhat late with our search. But fortunately we are now ready to announce the successful completion of this process. We would like to welcome the third member of the McMurry Physics Department, Dr. Timothy Renfro.

Dr. Renfro received his Ph.D. in Physics from the University of Texas at Dallas in 2004. He earned his B.S. in Physics from Tarleton State University in 1997 and his M.S. in Physics from Stephen F. Austin State University in 2001. Dr. Renfro has served as a Visiting Assistant Professor of Physics at the University of Dallas and also taught physics at Weatherford High School. Dr. Renfro's area of expertise is the optical properties of nanomaterials. His hiring will enhance the experimental component of our physics program, in particular in such areas as electronics, optics and solid state physics. Dr. Renfro's expertise will also help to supervise experimental student projects.

This May we again had a large group of graduating seniors. There are five graduates this year. Tyler McCracken has been accepted to the Physics graduate program at New Mexico Tech University. Kendra McBride continues to work towards her engineering degree in Texas Tech. Aaron Ramos will continue his career in the US Army. Dustin Brown and Rusty Stogsdill are planning to go straight into the job market. We have also learned that Geoff Colburn, who graduated in December 2007, has been accepted to the MS Physics graduate program at Texas State University at San Marcos. Unfortunately, our junior and senior classes are rather small and we only expect one graduate next year. At the same time this year's freshmen (now sophomore) class is still very promising. We have not lost any students during the spring semester and there are now seven students enrolled in Modern Physics for the coming fall. As I said in my previous newsletter, the quality of this student group is very high and we are looking forward to their future successes. Most of these students have also decided to have their first physics elective during their sophomore year and will be taking "Solar System Physics" with Dr. Keith in the fall. As a project component for that class three students (Michael Herriage, Jeannette Schofield, and Aaron Ward) traveled with Dr. Keith for a week trip to Flagstaff, AZ to perform astronomical observations at the Lowell Observatory. For details, see Dr. Keith's blog entry at <http://snscs.edublogs.org/2008/06/04/physics-students-travel-to-lowell-observatory-on-asteroid-hunt/>.

The freshman enrolment for the fall semester of 2008 has just started, so there is no clear picture at the moment how large the incoming freshman class is going to be. But as before we encourage our friends and alumni to tell anybody who is interested in physics and can potentially become a student about our physics program and let this person know about your experience at McMurry. Please feel free to give the prospective students our contact information and invite them to visit our web site at <http://www.mcm.edu/newsite/web/academics/ncs/physics/index.htm>.

We have not had many of you coming this year to meet with our students, but we would very much like to continue the series of talks given by the alumni on the subject "What I have done with my physics degree". Some of you have participated in this series in the past, but I think that by now all of the students who heard your presentations have left. Others may think that your story is not very interesting and does not deserve that much attention. This is not so, whether or not you are a recent graduate and just started your career path or a person with extensive job

experience, it all matters for our students. Some of them would like to know how to start right after they get out of college and what difficulties they may expect at the beginning, others would like to know what they can get from their degree in the long run. We would be more than happy to have any of you back and tell your story to our current students. If you happen to be in town on any occasion, please stop by the department and talk to us about new and exciting things happening with you. Even if you do not wish to make a formal presentation you can just talk to students, it always very important for them to hear and have an ability to talk with somebody who has succeeded in their careers and may serve as a guiding example.

Another bit of news is that this year we have continued to require all our graduates to complete a research project for graduation. The most successful projects this year are the following: Tyler McCracken has built a Tesla spark coil and demonstrated it in action to a group of physics students and faculty during the final presentation of his work. The equipment parts for this project were purchased due to generous support of our alumni, who responded to Joe Christensen's "Project 20" call last year. Dustin Brown has designed several models of sports cars using Solid Works CAD software. A small scale copy of one of his models, which he named "Neutrino", is now on permanent display in the physics department. Aaron Ramos has built his robot, which he called "Battlebot". The Battlebot now belongs to the physics department and its future improvements can be made by other physics students or as a group SPS project.

In March both Dr. Bykov and Dr. Keith accompanied by three students (Tyler McCracken, Rusty Stogsdill, and Michael Herriage) attended Texas Section of American Physical Society/American Association of Physics Teachers/ Society of Physics Students meeting at Corpus Christi. It was very important experience for students, since many of the talks at the conference were relevant to topics discussed in Classical Mechanics and Quantum Mechanics classes just before the trip.

Among the faculty news the following can be noted. Starting the 2007-2008 academic year Dr. Bykov has been teaching the freshman University Physics course as a Tablet PC intensive class and will continue doing so in the coming years with even more Tablet PC-based applications involved. We are also in the process of upgrading our introductory physics labs. Many of the experiments performed there are using the modern PASCO digital data acquisition systems. During this summer Dr. Bykov plans to finish modifications of the lab curriculum and continue with further modifications of the University Physics course.

We will also continue revisions and modifications of our upper division physics curriculum to allow our students more choices within the major and provide depth to their college education and opportunities for practical application of the acquired knowledge. Recently, the department has divided most of the upper division courses into two-semester sequences, where the first part of the sequence is required of all the majors and the second part can be taken by those students who want to gain more experience in that particular area of physics. Having two semester sequences has provided us with more opportunities to illustrate similar mathematical and/or physics concepts in the context of different areas of physics. This turns out to be crucial for student understanding of the subject. Having the second semester of most of the upper division courses will also allow us to include "individual" and "group" student projects into the structure of those courses and provide students with more hands-on experience and chances to practically apply what they have learned.

We will provide more of the research-rich experience for our students through variety of possibilities to work with individual department faculty as well as with interdisciplinary teams of faculty from different departments. Involvement of physics undergraduates into interdisciplinary research will become possible through the McMurry University Research Institute (MURI) centers. The department is already participating in the first of those centers organized this year. The McMurry Center for Mission Outreach with Science and Technology (MCMOST) is currently under development by Dr. Martin of Math, Dr. Veltkamp of Chemistry, Dr. Keith of Physics, and physics student Michael Herriage. The vision for MCMOST is to develop an educational and research center that would sponsor an annual project to serve a national or international developing community by implementing a solution to a problem within the community utilizing Science, Technology, Engineering and Mathematics (STEM). Each project

would be sponsored by an interdisciplinary team of faculty who would be in charge of providing the educational background needed for the project. The students and faculty involved would then work together to provide an interdisciplinary solution and support. The development of a detailed plan and structure for the Center will be completed during summer 2008.

In my previous newsletter I have mentioned the special significance which this year has for the McMurry Physics Department. In the fall of 2008, the department will celebrate its 50th anniversary. As I said, it is my goal to build stronger connections between the previous and present generations of McMurry physicists through exploring the rich history of the department from its early days until now. I have asked for your help in writing the detailed history of the department and I am very grateful to those of you who have responded to my call. I have received a few essays telling about memorable experiences, events and people who influenced you the most, while you were physics major at McMurry and how this affected your future careers. I will use these stories, while I am working on the "Department History" section of the Physics Department web site this summer. However, if you have not sent me your story yet, it is not too late to do so. I am just now starting to work on putting them all together. Even if you are a recent graduate, your memorable story is as important for me as much as a story of the person who graduated 45 years ago.

We are looking forward to celebrating our 50th anniversary in the fall. This year's McMurry University Homecoming is scheduled for October 23d-26th of 2008. Please reserve these days on your calendar. We are planning on having a special event during the Homecoming devoted to the department 50th anniversary. At the same time we will have 2008 inductions of the new Sigma Pi Sigma members. You will receive a special invitation for those events and we hope that as many of you as possible can join us on that occasion. If you have any interesting ideas on how to celebrate this event in the best possible way, please share them with us. I hope to hear from you soon.

If you have been recently added to our database and never received this letter before and/or by some reason want to be removed from the list and/or prefer to update your contact information and/or prefer to receive an electronic instead of a paper copy of this letter, please do not hesitate to contact me at the address above or by email at tbykov@mcm.edu.

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