Greetings from the CWU Physics Department,

This past year has been one of significant change. Along with several changes in upper Central Washington University administration, the Physics Department welcomed five new faculty and staff members this past year. I joined the department as chair in September 2007. Andy Piacsek began his tenure-track position while Ed Lulofs taught some of our physics courses. Erin Sargent joined us as secretary senior while Greg Lyman was hired as the Physics Department’s classroom and laboratory technician. Several positions were to fill vacancies left by Don Williamson, who retired, and David Laman, John St. George, and Margo Alden, who went on to pursue different careers. We would like to thank them for their work in the CWU Physics Department and wish them the best in their future endeavors.

I am also pleased to extend an invitation to come see us. This upcoming spring the Symposium on University Research and Creative Expression (SOURCE) will be held. This is a great opportunity for you to talk to current students and faculty and to hear what discoveries are being made in our laboratories and classrooms. In the fall of 2009, we will be hosting the Washington Section meeting of the American Association of Physics Teachers. Please visit our Web site (www.cwu.edu/~physics) for updates and announcements.

I hope you enjoy reading this edition of Tachyon Tribune. Please give us your feedback and suggestions for next year’s edition. If you are planning to be in the Ellensburg area, please visit CWU and the Physics Department.

Sincerely,

Michael Jackson
Professor and Chair
Department of Physics

Physics students and faculty at the year-end BBQ and \( \Sigma \Sigma \) Induction
Meet our Newest Members

**Michael Jackson** joined the Physics Department in September 2007 as department chair. He received his PhD in Physics from New Mexico State University and has held teaching positions at the State University of West Georgia and the University of Wisconsin-La Crosse. His research involves investigating stable molecules and free radicals using infrared and far-infrared lasers.

**Andy Piacsek** joined the department in September 2007 as a tenure-track assistant professor. He received his PhD in Physics from Penn State University and is by no means new to the university. Andy has held several teaching and administrative positions at CWU, including serving as director of the Science Honors program from 2004 through 2008. His research involves computational wave modeling, including the propagation of tsunamis and the distortion of sonic booms propagating through turbulence. He is also assembling an experimental acoustic and vibration laboratory for experimental studies of wave propagation in nonlinear media.

**Ed Lulofs** joined the department in January 2008 as an adjunct faculty member teaching in the Physics and Industrial Engineering Technology departments. He received his PhD in Physics from the University of California-Irvine and has performed research in fractals and wavelets as well as high-energy particle physics. He has held several teaching positions, most recently at Azusa Pacific University and has also taught for the CWU Geology Department.

**Erin Sargent** joined the department in February 2008 as a senior secretary. She comes to us from the Seattle area after having worked in the private sector for several years.

**Mr. Greg Lyman** joined the department in May 2008 as our classroom and laboratory technician. He received his BS in Electrical Engineering Technology from CWU and is currently working on his MS degree in the same field.
Dr. Palmquist goes to China ...

Consolidated from CWU’s News and Headlines, August 1, 2008

Dr. Bruce Palmquist spent two weeks in China this past summer at Shaanxi Normal University (SNNU) in Xi’an, China, nearly 575 miles southwest of Beijing. Bruce was invited to SNNU by fellow physics professor Guian Li, who teaches at the university. Li visited the CWU Physics Department during the 2006-07 school year.

During his visit, Bruce gave talks on several subjects including best practices in teaching physics and middle school science education, fostering creativity in the classroom, as well as a talk on CWU's Science Education Department. His first presentation attracted a crowd of about 200.

"He gave us lots of advice and suggestions about teacher education," Li said. "Bruce did a very good job at SNNU. We want to cooperate together to research the teacher education program, and make SNNU teacher education international. We will do work together in the future." Bruce said he hopes to go back to China again, and appreciated the invitation Li offered, as well as the funding given to him by several organizations and institutions, including CWU, which made his trip possible.

Bruce kept a blog while he was in China. To read up on his trip, visit the web site http://bruceinchina.blogspot.com. SNNU also interviewed him and aired the interview on television. That interview can be found online at http://news.snnu.edu.cn/bencandy.php?fid=17&id=4427.

... while Dr. Piacsek visits Europe

Dr. Andy Piacsek spent one month visiting Europe, which included attending the Acoustics ’08 conference in Paris, France. At the conference, Andy gave a presentation entitled Investigating Musical Sound as a Model for the Scientific Process. He also co-chaired the Physical Acoustics: Mathematical and Numerical Methods I session.

Foucault Pendulum at the Pantheon in Paris.

WE WANT TO HEAR FROM YOU!

We like reading updates from alumni? You could be featured in the next edition!

There are a couple of ways to submit updates for the newsletter: You can complete the back page on this newsletter and mail it to the CWU Physics Department or you can e-mail the department at jacksonm@cwu.edu any time during the year.
Under the leadership of Professor Sharon Rosell, the CWU Society of Physics Students (SPS) was recognized by the national society as an Outstanding SPS Chapter. The CWU SPS chapter has received this award eleven times in the past fourteen years! The SPS club was also recognized by the university as May’s Club of the Month.

Physics (and Philosophy) major Travis Petersen received the SPS Leadership Scholarship from the Society of Physics Students National Office.

Annette Hinthorne, Sami Abdul-Wahid, and Pete Wojcik were inducted into ΣΠΣ, the national Physics Honor Society.

Congratulations to Eric Kangas for graduating with his BS in Physics from CWU in June 2008. He will be pursuing his graduate degree in Physics at the University of Idaho.

The CWU Physics Department will be hosting the Washington Section of the American Association of Physics Teachers in September/October 2009.
Undergraduate Research Highlights from 2007-2008

This year, several physics students presented their research at a variety of regional and local conferences, including SOURCE 2008. SOURCE is a CWU symposium showcasing the scholarly work of students and faculty.

Sami Abdul-Wahid (Advisor: Dr. Michael Braunstein) constructed a circuit that models the logistic equation for the eventual purpose of building a neuron. He also won an “Outstanding Undergraduate Student Oral Presenter” award at SOURCE 2008.

Evan Masters (Advisors: Drs. Michael Jackson and Michael Braunstein) incorporated a logarithmic ratio amplification circuit to improve the degree of accuracy and precision to which the location of diffraction minima from a single slit diffraction pattern can be identified.

The CWU SPS club completed their research on the Electronic Realization of Chaotic Systems, funded by the Society of Physics Students. This project spanned several years and resulted in a number of presentations, including a poster presentation at the Northwest Section Meeting of the American Physical Society. The students participating on this project include Travis Petersen, Chris Parker, Eric Kangas (Class of 2008), Sami Abdul-Wahid, Evan Masters, David Cross (Class of 2007), James Mullen (Class of 2007), and Kendall Taylor (Class of 2007). Dr. Michael Braunstein served as research advisor and Professor Sharon Rosell served as faculty advisor.

Eric Kangas (Advisor: Dr. Michael Braunstein) measured the light curve for the eclipsing binary SV Camelopardalis. This was accomplished using differential photometry, made possible through a recent upgrade of our Apogee Alta camera and Maxim DL software funded by the Physics and ITS departments.

Travis Petersen (Advisor: Dr. Michael Braunstein) investigated the characteristics and procedures of numerically calculating the Lyapunov Exponent.
Giving

The CWU Physics Department has two foundation accounts to assist with a variety of activities. These are

**The Physics Department General Fund:** This fund is designed to enhance physics student experiences at CWU including but not limited to student research and travel, student awards ceremony and other such efforts.

**Physics Scholarships:** This fund is specifically for physics students. Currently scholarships are offered for incoming students (freshmen and transfer students).

All contributions to CWU are tax deductible. Checks should be written to Central Washington University Foundation – Physics (either General Fund or Scholarships).

If there are other programs or activities you are interested in supporting, please contact the Physics Department or the CWU Foundation.
What about you?

We want to hear from and about you! Along with receiving news and comments, we are interested in any pictures you would like to contribute for future issues or for placement on the Physics Department’s Web page. Please fill out this form and mail it to Central Washington University, Physics Department—MS 7422, 400 East University Way, Ellensburg, WA 98926-7422. Alternatively, you can e-mail jacksonm@cwu.edu.

Name: ___________________________ Maiden/Former Name: __________________

Mailing Address: _____________________________________________________________

City: ____________________________ State: _________ Zip: _________________

Home Phone: ______________________ E-mail: _________________________________

Current Employer: ___________________ Job Title: _____________________________

Year Graduated: ___________________

News and Comments: _________________________________________________________

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Stay involved with the CWU Physics Department!

I’m interested in visiting CWU to (check all that apply):

☐ Present a seminar

☐ Give career advice to students

☐ Other suggestions: _______________________________________________________

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To help with the recruitment of new students, we are interested in receiving “testimonials” from alumni. In particular, we are looking for one or two paragraph statements highlighting how the CWU physics program prepared you for graduate school and/or your professional career.

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