
Physics Department News



WESTERN MICHIGAN UNIVERSITY

COLLEGE OF ARTS & SCIENCES

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Editor's Note:

As noted in the previous newsletter dated December 2005, each new issue, as well as all back issues, are posted on the department's website: (<http://tesla.physics.wmich.edu>).

Thus, you can find this current issue of the newsletter there as well as the previous issues back to February 2003. Again we remind you that if you prefer not to receive future newsletters by postal mail, please drop us a note (my email address is below) and we will take you off the list of persons to whom a paper copy is sent. We could also send you an electronic copy (as a PDF file) of the newsletter if you prefer that means.

As always, if you have any feedback concerning the newsletter, e.g., in terms of format, other features you would like to see, or some information about yourself that you would like us to print, please contact me directly. You can contact me by email (john.tanis@wmich.edu), telephone (269-387-4960), or fax (269-387-4939). Alternatively, you can fill out the "Feedback/Update Reply Form" that is included at the end of each issue of the newsletter. We would very much like to hear from you.

Enjoy this latest issue of the newsletter!

John A. Tanis, Editor
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From the Chair:



Paul V. Pancella, Chair

Welcome to this edition of the news from WMU Physicsland. As I write

this, another busy academic year has ended, and we are enjoying the somewhat slower pace and fine weather of early summer in Kalamazoo. Freshman Orientation is in full swing, and the campus is buzzing with newly admitted students and their parents.

I have several items to share with our friends since our last newsletter was published. High on the list is a changing of the guard in our accelerator lab. As mentioned in the last newsletter, our long-serving accelerator physicist, Steve Ferguson, retired at the end of March this year. Steve has done a great job running our tandem lab for over 30 years, and I hope we were able to show our appreciation at the party we had in his honor. Luckily for us, he still comes in as needed to help us out. Steve's wife Connie has also retired, but they plan to remain in the Kalamazoo area.

Steve has made a substantial financial contribution to establish the "Stephen M. Ferguson Endowment for Physics", for which we are extremely grateful. This fund will be used primarily to support travel and professional development for members of our staff.

Our recent search for Steve's replacement met with success. Dr. Asghar Kayani from Montana State University in Bozeman has accepted our offer to take the position of accelerator physicist. Dr. Kayani is very well qualified to continue directing the current activities in the lab, as well as to develop his own program in applied physics research. The position has been converted into that of Faculty Specialist, the first time this employee category has been used in the physics department. Briefly, this means that Dr. Kayani will have the status of faculty rank, but without teaching duties. Dr. Kayani will arrive with his family from Montana before the end of June, and will begin work after the Independence Day holiday. Our next newsletter will include a feature on this newest member of our faculty.

In March, we were treated to a visit from Hazel Rood, daughter-in-law of Paul Rood who chaired our department from 1944 to 1964 (and for whom Rood Hall is named). Mrs. Rood lives near campus and remains quite active in the community. She and her nephew Jon (who lives in Calgary, Alberta) continue to generously support the Rood scholarship fund, which supports some of our best undergraduate physics majors each year.

John Greenhoe, of the WMU Development office, assisted in making the arrangements and provided lunch for Hazel and some of the students who are currently benefiting from these scholarships. Afterward, I was delighted to be able to take her on a tour of our various offices, classrooms, and labs. She lent me a digital copy of some of Paul Rood's home movies, which I am in the process of getting copied.

Elsewhere in this newsletter, you may read about the results of the Graduate Program Review. The graduate programs in physics were indeed reviewed very favorably by the team and the administration. We already knew we had pretty good programs (master's and Ph.D.) but convincing the reviewers required a lot of work, mostly by the faculty. So, in addition to those who worked on the two review teams, we are very grateful to the rest of the faculty who helped assemble and verify the substance of our report.

Two more brief items: Gulay Birkok, a former student here who is now on the faculty at a university in her native Turkey, is spending six months in residence in our department working with Art McGurn. Also, at the end of the current 2005-06 fiscal year, the College of Arts & Sciences was able to make a significant dispersal of funds to upgrade the equipment for our Advanced Lab. This is the "capstone" lab course taken by all of our physics majors, in which we try to give them experience with the most contemporary experimental

tools we can supply. Keeping this equipment up to date is a perennial problem, because enrollment is relatively small and supplemental lab fees can't provide sufficient funds for relatively expensive detectors and electronics. This upgrade will add some experimental opportunities to this course which should remain relevant for many years to come.

On the more personal side, my term as president of the WMU Faculty Senate has now ended, so I can get back to department work with fewer distractions, and maybe (maybe) even find some time to do research. It was a privilege to serve in this capacity for a year, but I am mostly just glad I was able to survive.

So please, enjoy the rest of this newsletter, and be sure to keep in touch. As always, we thank the editor and staff who have put this together. The editor and I will be happy to hear from you if you have suggestions for future content or improvements.

Paul V. Pancella
Chair

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What's New at the University

Much has changed at the university in recent years and several changes are currently in progress as well. Much of this information can be found at the university's website (<http://www.wmich.edu>). Here, only a few items are mentioned.

Notably, during the past academic year every graduate program at the university underwent an extensive review to determine if changes (enhancement, elimination, or consolidation) were in order. The reviews were accomplished by seven teams assigned to the different colleges at the university. Each review team was comprised of eight members consisting mostly of faculty, but with a few chairs as well.

The head of each review team could not lead the team reviewing his/her department's programs, nor could any team have more than three members from within the college being reviewed. **John Tanis** was the team leader responsible for reviewing the Colleges of Business and Fine Arts, and **Jerry Hardie** served on the team that reviewed the College of Engineering programs.

The results of this extensive review were announced on May 11 by Provost Linda Delene and President Bailey. Based on the recommendations, physics fared very well with the department scheduled to increase its faculty so that we can expand into new areas of research such as astronomy and geophysics. The recommended changes must still be approved, however, by the Board of Trustees, which will meet in July.

Shortly after announcing the recommendations concerning the university's graduate programs Provost **Linda Delene** resigned and announced her intention to return to the faculty as Professor of Marketing in the Haworth College of Business, where she has been a faculty member since 1978. Following her resignation, President Bailey announced the appointment of Dr. **Janet Pisaneschi** as Provost until July 1, 2007. Prior to her appointment, Dr. Pisaneschi had intended to retire following stepping down as dean of the College of Health and Human Services. The university will conduct a national search during the next year to find a new permanent Provost.

Faculty Highlights

Nora Berrah has obtained a contract grant for \$75,000 to live and work in the Stanford area from January - August 2006 for the purpose of assisting in preparations for Atomic, Molecular, and Optical science to be conducted at the Linear Coherent Light Source (LCLS), currently under construction at the SLAC facility at Stanford. Nora is the co-team leader of the AMO project at

LCLS along with Lou Dimauro from Berkeley.

During the summer of 2005, **Charles Henderson** was invited to lead a working group at the Foundations and Frontiers in Physics Education Research Conference held in Bar Harbor, Maine. The group focused on how to get educational research results disseminated and used by typical faculty as a means of bridging the gap between physics education research and practice. The results of the working group are summarized in an article in the Fall 2005 issue of the American Physical Society Forum on Education Newsletter.

David Schuster and **Charles Henderson**, along with colleague Paul Vellom from the College of Education, have been awarded a \$200,000 NSF research grant from the CCLI program for a project entitled "Integrated Apprenticeship in the Teaching of Elementary Science" (IATES). This is a three-year project which will integrate the design of the Physics 1800 course with the elementary science teaching methods course ED 4010. The goal is to adopt an apprenticeship instructional model and a scientific inquiry approach to developing the subject matter. The project will start in January 2007.

Arising from a current NSF project involving a comparison of instructional methods, David gave a presentation entitled "The Design of Parallel Inquiry and Direct Instruction in Science: Avoiding Straw Man Comparisons" at the meeting of the AAAS in St Louis in January 2006.

Staff Highlights

A new postdoctoral research associate has joined the department. **Zoran Pesic** joined Nora Berrah's group in January 2006, coming from an earlier postdoctoral position at the Pierre and Marie Curie University, Paris, France where he worked in the group of Dr. Dominique Vernhet. Zoran is in charge of further

developing the atomic cluster program, as well as working on the ion-imaging spectrometer and the negative ion program.



Dr. Zoran Pesic

We welcome Zoran to the research staff of WMU!

Rebecca Scherzer, daughter of physics department lab supervisor **Bob Scherzer**, received her Ph.D. in statistics from WMU at the April 2006 graduation ceremony. Although we may be wrong, we know of no other child of a physics department faculty or staff member who has received a Ph.D. from WMU. Thus, this marks a significant event.

Bob writes the following regarding his daughter's achievement:

"Those of you who have been here long enough and still have memories might remember back, when I first started here in the fall of 1987, that I used to bring my daughter Rebecca to some of the department picnics, primarily at Scotts Mill Park (the buffalo park). Well, she is no longer in high school. Since then she has graduated from high school, gone off and gotten a math degree from the University of Michigan, came to WMU and got a degree in biology, then a masters in biostatistics.

For her internship she worked for a consulting company in Philadelphia. Her boss wanted her to stay but she wanted to come back to Kalamazoo, I'm sure to be near her dad, and ended up working from her home in Kalamazoo for the consulting company from Philadelphia. During this time she started working on a

Ph.D. in statistics at Western and this past April 29 she received her degree. She is now employed as a research statistician for a company called NCIRE in San Francisco. It's a joint collaboration between the University of California, the Veterans Administration, and the National Institute of Health. She is now in a position to support her beloved parents."

Congratulations to Rebecca...and to Bob and his wife!

ICPEAC Program Meeting – Sept. 2006



As noted in the previous newsletter, the physics department will host the International Conference on Photonic, Electronic, and Atomic Collisions (ICPEAC) in Kalamazoo from July 22-28, 2009. This international conference typically attracts 500 - 600 physicists from around the world, and previous conferences have been held in various international locations. This will be the 26th gathering of this biennial event, and Kalamazoo will mark the 50th anniversary of ICPEAC, making it a special occasion for the conference and a particularly opportune time for us to host it. **John Tanis** and **Nora Berrah** are the co-chairs for ICPEAC 2009, with Emanuel Kamber and Tom Gorczyca serving as members of the local committee. Recently, the Executive Committee of ICPEAC requested that the program planning meeting for the 2007 ICPEAC be held in Kalamazoo

in fall 2006. Although next summer's ICPEAC will not take place until late July in Freiberg, Germany, it is customary to select the program of invited speakers about a year in advance. The ICPEAC program meeting will be held from September 29 – October 1, 2006, with about 35 members from around the world attending. Some of the planning meeting sessions will be held at the Radisson Plaza Hotel downtown, while other sessions will be held on campus in the Bernhard Center. A reception is planned on Saturday evening in the Oaklands. This should be a wonderful opportunity to showcase Kalamazoo and WMU!

Student News

Graduate students **Ileana Dumitriu** and **Huaizhen Zhang**, both working under the supervision of Nora Berrah, passed their Ph.D. comprehensive exams in November and December 2005, respectively. Both students are conducting their dissertation research at the Lawrence Berkeley Laboratory Advanced Light Source. Congratulations to Ileana and Huaizhen!

Diane Strohschein and **Dan Garvin**, both senior undergraduate majors, attended the Division of Atomic, Molecular, and Optical Physics (DAMOP) meeting of the APS held in Knoxville, TN near the end of May. Each of them presented posters on their research done under the direction of John Tanis. Both students received a College of Arts and Sciences Research and Creative Activities Award of \$500 to help support their research and the costs of attending the conference. This was the first professional conference for Diane and Dan, and hopefully it was a rewarding and beneficial experience!

In addition to the Arts and Sciences research award that we reported in the December 2005 issue, undergraduate physics major **Will Johnson** has received funding from the Advanced Light Source at

Lawrence Berkeley National Laboratory to do research there from May through August 2006. Will works under the supervision of Nora Berrah, and he is involved with the negative ion program as well as the photoionization of clusters program.

In Memorium...

It is with sadness that we note the passing of Emeritus Prof. **James Zietlow** on February 12. Jim retired from WMU in 1986, but following his retirement he was a frequent visitor to the department, attending physics colloquia and other events hosted by the department.



Prof. James Zietlow

Below are some excerpts from an obituary that appeared in the Kalamazoo Gazette:

“James Zietlow was a man of many interests who loved life, whether it was teaching as a professor of physics at Western Michigan University; reading and writing, which he did frequently in retirement; or going to breakfast with other retired WMU faculty members.

‘He loved his profession -- he loved physics and he loved to teach,’ Myrtle Zietlow, his wife of 53 years, said of her husband, who also served as associate dean of the College of Arts and Sciences at WMU for nine years.

After he retired as professor emeritus of physics in 1986, Zietlow concentrated on reading and writing. He wrote and self-published a book of historical fiction, entitled ‘Resplendent and Unfading,’ and was an honorable-mention winner in the adult-memoir category of the 2002 Community Literary Awards.

A Chicago native and lifelong Chicago White Sox fan, Zietlow was elated last fall when the White Sox won the World Series for the first time in 88 years, his wife said.

Born Dec. 15, 1921, Zietlow completed his bachelor's degree at DePaul University in his native Chicago after returning from service as a pilot in the Army air corps. He then earned his Ph.D. from the Illinois Institute of Technology.

After working in private industry, he became graduate dean and head of the physics department at New Mexico Highlands University. He joined the faculty at WMU in 1965.

In 1969, Zietlow was named associate dean of arts and sciences and acting dean in 1978. He returned to teaching full time later in 1978.

In addition to his wife, Zietlow is survived by three children and their spouses, David and Merrienne Zietlow, of Erie, Pa., Kenneth and Susan Demeuse, of Caledonia, and Thomas and Miriam Zietlow, of Apex, N.C.; nine grandchildren; a brother and sister-in-law, Lester and Ethel Zietlow of Scottsdale, Ariz.; and a sister, Alice Zietlow of Merrill, Wis.”

--from the Kalamazoo Gazette

Those of us who knew and worked with Jim recognized his dedication to

teaching and his commitment to his students. He will be greatly missed.

Annual Student Awards

Spring 2006

David Carley Memorial Graduate Fellowship Award:

Robert Cipri
Buddhi Rai

Jacob Dewitt Outstanding Teaching Award:

Scott Marley
Subramanian Vilayurganapathy

Haym Kruglak Graduate Student Teaching Excellent Award:

Jonathan Lighthall

Haym Kruglak Undergraduate Student Teaching Excellent Award:

Luis Webb

Leo Parpart Scholarship:

Muhammet Fatih Hasoglu
Lihua Wang

Nathan Nichols Scholarships:

Patrick Hill
William Johnson
Justin Klein
Diane Strohschein

Paul Rood Scholarship:

Joseph Bos
Dan Garvin
Kurtis Wickey

Presidential Scholar:

Justin Klein

Wilcox Memorial Award:

Justin Klein
Diane Strohschein

Recent Graduates

B.S.

December 2005

Jason Shanafelt

April 2006

Daniel Adams
Andrew Hawkins
Justin Klein
Travis Martin
Aaron Mcdowell

Amy Ohrstrom
David Pelot
Caleb Ryder
Luis Webb

M.A.

April 2006

Mohammad Al Amar

Book Awards

Spring 2006

1000 Matthew Murphy-Dubay
1020 Candice E. Young
1040 Emery C. Polasek
John Kusku
1060 Patrick Malsom
John Gazley
1070 Simone R. Lindsey
Jacob Elenbaas
1130 Benjamin Krupp
Christopher M. Lucido
William C. Pyle III
Joshua Wiese
1150 Amanda L. Vliestra
Curtis A. Sandifer
2050 Justin R. Biddle
Brian L. Doorlag
Kevin McDonough
Staci Salo
Bryan Phinezy
Nicholas A. Saxton
2070 Justin E. Constantino
Benjamin L. Smith
Kurtis J. Wickey
Jeffrey Harms
Jack Winkelbauer
3090 Paul Hoekstra
Jesse Snyder
Marguerite A. Arthur

Department Roster

Faculty

Nora Berrah
Clement Burns
Sung Chung
Michael Famiano
Thomas Gorczyca
Dean Halderson
Gerald Hardie (Assistant Chair)
Charles Henderson
Emanuel Kamber
Kirk Korista
Arthur McGurn
Paul Pancella (Chair)
Lisa Paulius
Alvin Rosenthal
David Schuster
John Tanis
Alan Wuosmaa

Emeriti

Eugene Bernstein
Stanley Derby
Dean Kaul
Robert Poel
Robert Shamu
Michitoshi Soga

Staff

Kerry Cochran
Steve Ferguson
Benjamin Gaudio
Allan Kern
Lori Krum
Bob Scherzer
Rick Welch

Post-doctoral Research Associates

René Bilodeau

Jun Fu
Dragan Nikolic
Zoran Pesic
Daniel Rolles
Ayman Said

PhysTEC

Drew Isola

Graduate Students

Abunima, Alaa (Qatar)
Al-Amar, Mohammad (Jordan)
Al-Faify, Salem (Saudi Arabia)
Ayyad, Asma (Israel)
Bommana, Sudha (India)
Cassidy, David (Michigan)
Cipri, Robert (Michigan)
Das, Susanta (India)
Dumitriu, Ileana (Romania)
Durren, Michael (Michigan)
Ghannam, Talal (Syria)
Grineviciute, Janina (Lithuania)
Hasoglu, Fatih (Turkey)
Kodikara, Ravin (Sri Lanka)
Kodituwakku, Nalaka (Sri Lanka)
Lighthall, Jonathan (Michigan)
Marley, Scott (Michigan)
Rai, Buddhi (Nepal)
Senarath, Buddhika (Sri Lanka)
Vilayurganapathy, Subramanian
(India)
Vyas, Anjali (India)
Wang, Lihua (China)
Wang, Xue (China)
Wei, Haipeng (China)
Winkworth, Melike (Romania)
Zhang, Huaizhen (China)
Zhang, Yingfa (China)



Feedback/Update reply form

Please use this form to update our mailing list, and/or to let us know what you have been doing, and what you would like to see in future newsletters. Fill out any portion of the form below and return to: **Newsletter Editor, Physics Department, 1903 W. Michigan Avenue, Kalamazoo, MI 49008-5252**

Name _____
first middle last

Home address _____

city state zip

Home phone _____ Email _____

Employer _____ Job title _____

Work address _____

If alumni, degree and year: _____

Tell us more about yourself, and/or what you would like to see in future newsletters:
