

## Physics Department News gets a New Look

### INSIDE THIS ISSUE:

- 2 What's New at the University
- 2 Faculty Highlights
- 4 Alumni Achievement Awards
- 4 More Alumni news
- 4 Staff Highlights
- 5 Soga Center Opens
- 5 Student News
- 6 Annual Student Awards
- 6 Recent Graduates
- 6 Book Awards
- 6 Department Roster
- 7 Feedback form

Yes, friends, that's our lead story this month. WMU and the College of Arts & Sciences are collectively trying to improve the image we present to the public, and the Physics Department has finally decided to go along. Consultants have been hired to research our new 'brand identity'. The WMU presence on the world wide web will soon get a major facelift. Our own College has hired a communications coordinator to enhance our public relations. Part of her job has been to try to give most of our materials a more consistent look, hence the new masthead and logos you see above.

It's not all that different, really, and with all the other changes going on around WMU, this seemed like a good time to start this transition. As usual, our goal is to keep all of our friends up to date on the happenings in our department, and keep the lines of communication open in both directions. The full color version of this newsletter is available as a pdf file on our website; find it at [www.wmich.edu/physics](http://www.wmich.edu/physics). We hope you find something here to interest you. If you have comments or questions for the editor, feel free to email me at [Paul.Pancella@WMich.edu](mailto:Paul.Pancella@WMich.edu).



## What's New at the University

Several major changes are afoot. As of this writing, WMU is preparing to welcome her 8<sup>th</sup> president. Dr. John M. Dunn will take office on the first of July, and interim president Diether Haenicke will get to retire again. Dr. Dunn is a professor of exercise and sports science, with a long career at Oregon State and the University of Utah before he went to Southern Illinois University at Carbondale in 2002. At SIU, he was provost and vice-chancellor, and was serving as the interim chancellor when hired by WMU. Dr. Dunn will face many challenges as our president, and we in the Physics Department look forward to working with him for some years to come.

That same July 1 will see the retirement of our interim provost as well, Dr. Janet Pisaneschi. Dr.

Pisaneschi has served for just over a year since the resignation of Dr. Linda Delene. We haven't yet heard who will be our next or interim provost; that may be known by the time you read this.

As if this were not enough, our longest-serving vice-president is also stepping down this summer. Robert Beam is retiring after over 40 years serving our university. Bob has been in charge of business and finance at WMU through the terms of at least four presidents, not counting the interims. He will take a lot of institutional memory with him when he goes, and we wish him well.

Our physical campus continues to evolve around us. A major new chemistry classroom building recently opened for business between Waldo library and Wood Hall. The beautiful

Richmond Center for the Visual Arts is another brand-new facility not so far from us, linking Kohrman Hall with the Dalton Center and the Miller parking structure. The adjacent wing of Kohrman (former home of Engineering) is being renovated to serve the School of Art. On the horizon (and awaiting funding) are major changes to the Fine Arts Plaza and the parking lot in front of Sangren Hall.

The graduate students who have teaching assignments at WMU have formed a union and negotiated their first labor agreement. The "Teaching Assistants Union" or TAU became the TA's bargaining agent in the Spring of 2006 and just ratified a 2-year agreement covering wages, tuition remission, health insurance, and other work conditions.

## Faculty Highlights

### Jerry Hardie to Retire

After 42 years on our faculty, **Dr. Gerald Hardie** has decided he is ready to join the ranks of the emeriti. Jerry will retire after the next spring semester, in May of 2008. Jerry is by far the most senior member of our faculty, and was here to welcome most of our surviving emeriti faculty.



*Jerry Hardie*

The current chair/editor of this publication counts himself fortunate to also call him a friend, as well as the most important mentor of my faculty career.

Canadian by birth, Dr. Hardie came to us from the IIT Research Institute in Chicago in 1965. He was doing research there after completing his graduate studies at the University of Wisconsin-Madison. He worked in the field of experimental nuclear physics.

During his long career at WMU, he made his mark in all three traditional areas of faculty work, teaching, research, and service. He taught a wide variety of courses in uncountable sections, and received the Alumni Association's Teaching Excellence Award in 1991. He worked at the Argonne National Lab as well as being a key part of the team which utilized our brand new Van de Graaff accelerator in the 1970's. He has administered the Luise Myer-Schutzmeister Award in Physics for many years, and has been the assistant chair of our department for the past five.

There is no question that Jerry deserves to enjoy his retirement, but he will be missed in many ways here in the physics department.

### Nanocapillaries and ICPEAC XXV

**John Tanis** has been awarded a Research Opportunity Award in the amount of \$50,000 from the The Research Corporation for a project entitled "Guiding of Fast Electrons and Ions in Nanocapillaries". This project will run for two years and is a new direction for Dr. Tanis' research. Along with some Ph.D. students, he will study the very interesting behavior of charged particles in very small tubes, openings in solid matter of some billionths of a meter in diameter.

John also received a National Science Foundation grant in the amount of \$7500 to support travel for students and postdocs who participate in ICPEAC XXV. This grant will provide 12-15 awards to US students and postdoctoral researchers to attend the International

Conference on Photonic, Electronic, and Atomic Collisions (ICPEAC) to be held in Freiburg, Germany from July 25-31, 2007. As noted in previous newsletters, this biennial conference will be hosted by WMU in 2009.

## Gender Gap in Physics

**Nora Berrah**, chair of the committee on the status of women in physics for the American Physical Society, organized (with a steering committee) a workshop entitled "Gender Equity: Strengthening the Physics Enterprise in Universities and National Laboratories". The workshop was held at the American Physical Society headquarters in College Park, MD this past May.

The gender gap in academia and national laboratories is a serious concern, especially in the present era when continued advancements in science are closely coupled to national security and a strong economy. It is critical to broaden the participation and assure contributions from the entire available pool of talent. These concerns were addressed at the workshop by bringing together the chairs of major research-oriented academic physics departments as well as several physics/physical science division directors from major national laboratories.



*Nora Berrah*

The goals of the workshop were to examine the underlying causes for the scarcity of women in physics, and formulate specific recommendations for actions to significantly improve the recruitment, retention, and promotion of female students, postdoctoral researchers, faculty and scientists in physics.

The workshop consisted of presentations, panel discussions and break out sessions by distinguished speakers. In addition, leaders from NSF (Physics, Astronomical Sciences and Material Sciences) and DOE (Basic Energy Science, Nuclear Physics, High Energy Physics, Advanced Scientific Computing), who funded this workshop, participated fully.

Nora is still busy preparing the reports, but initial indications are that this workshop was a success.

## Free-Electron Lasers

**Nora Berrah** has also organized the first X-ray Free Electron Laser (FEL) summer school at Stanford University's PULSE Center, located at the Stanford Linear Accelerator Center. She is the Co-chair with Phil Bucksbaum, Director of the Pulse Center and Professor at Stanford University.

The summer school is timely since the Linac Coherent Light Source (LCLS) FEL will be ready for use in 2009. The event, hosted at SLAC June 18-22, 2007, will present comprehensive lectures about free electron lasers (FEL), x-ray FEL, different detection methods, and a broad range of scientific applications.

The program will cover both fundamentals of soft x-ray, and hard x-ray FEL and their use in spectroscopy and diffraction. Science applications will be given in physics, chemistry and material science. Lectures will be

presented by expert scientists in the various fields.

The goal of the school is to disseminate information about scientific opportunities in ultrafast science and train students and postdocs on the new FEL facilities. This includes discussing the new experimental techniques which need to be developed and built due to the different nature of the LCLS compared to ultrafast lasers or synchrotron sources.

The attendees will be mostly students, postdocs, faculty and scientists who want to get into ultrafast science with FELs, as well as the lecturers.

## Kirk Korista: Emerging Scholar

This past February, our own **Kirk Korista** was honored with one of three "Emerging Scholar" awards at WMU's Academic Convocation. The new program was launched this year to acknowledge the accomplishments of WMU faculty members who are among the rising stars in U.S. higher education. It is designed to celebrate the contributions of faculty who are in the first decade of their careers at WMU and who, by virtue of their contributions to scholarship or creative activity, have achieved national recognition and

demonstrated outstanding promise to achieve renown in their continuing work.



*Kirk Korista*

## Sabbatical

**Sung Chung** has been awarded a sabbatical leave, to be taken in the Spring semester of 2008. He will be a visiting professor at the University of Tokyo, and work with Dr. Kazuo Ueda, director of the Institute for Solid

State Physics there. Dr. Chung will extend his theoretical studies of systems with strongly correlated electrons.



*Sung Chung*

## Alumni Achievement Awardees

We've got a little catching up to do in reporting about this college program. Each year, our College of Arts & Sciences invites all departments to name one of their graduates for this award, and they are recognized at a gathering the day before homecoming in the Fall.

In 2004, the awardee from Physics was **Peter S. Anderson**. Peter received his bachelor's degree in Physics and Applied Math from WMU in 1980. He did some graduate-level research in math, surface physics, and even high energy physics, but achieved most of his success as a teacher. He became chair of the Science department at Oakland Community College (Highland Lakes Campus) in 2002. Peter gave us a colloquium about some of the work he has done with computer aided instruction.

In 2005, the Alumni Achievement award in Physics went

to **Michael G. Khazhinsky**, who got his Ph.D. here in 1997, studying with **Art McGurn**. After initially working for Motorola for a while, Michael is now a principal staff scientist at Freescale Semiconductor, Inc., of Texas. He has specialized in protecting various solid state devices from damage due to electrostatic discharge, and holds patents in this area. Michael gave two talks in the department about this area of his research, one in the spring and one in the fall at the time of the award.

This past Fall, we were pleased that **Larry Satkowiak** was able to visit us to accept his award. Dr. Satkowiak is in charge of nuclear nonproliferation programs at the Oak Ridge National Laboratory, where he has worked since 1995. Larry was an undergraduate double major in applied math and physics, and continued here to get his M.A. in Experimental Nuclear Physics in

1979. His nuclear physics Ph.D. was then earned at Notre Dame. On October 13, 2006, he gave a very interesting talk about a range of current nonproliferation efforts entitled "Nuclear Terrorism – What is Being Done".



*Larry Satkowiak, M.A. 1979*

## More Alumni News

**Donya Dobbin** (BS 1997, MA 2002) has returned to work on her Master's degree in education, and will be teaching several physics courses for us over the next year.

**Richard Bell** (BS 2001) has also done some part-time teaching for us, as well as for KVCC. He teaches introductory astronomy as well as serving as president of the Kalamazoo Astronomical Society.

Professor **J. Thomas Dickinson** ('63) received the "Eminent Faculty Award" this past spring, the highest honor bestowed by Washington State University on her faculty. Tom has received many other awards and recognition during

his career as a successful researcher and innovative teacher. He was named a distinguished alumnus of WMU in 2003.

## Staff Highlights

Postdoc **Dr. Daniel Rolles** was invited to give a presentation at one of the most important international conferences in AMO physics. The conference is ICPEAC and will be held in July 2007 in Freiburg, Germany.

Our department is saying goodbye to **Drew Isola**, who has worked extensively on the PhysTEC project for the past two years.

Readers may recall that this multi-year funded project has done a lot to improve our secondary education teacher preparation program in physics. Drew was the fourth "Teacher-in-Residence" for the project, an expert high school teacher on loan to us from an area school district.



*Drew Isola*

## Soga Center Opens

Named after one of our illustrious emeriti faculty, the **Michitoshi Soga** Japan Center opened at WMU this past Fall. It is headed by Steve Covell, and housed in the Haenicke Institute for Global Education. Its purpose is to focus research and scholarly activity in and about Japan, as well as to serve as a community resource.

WMU has had strong ties with Japan for many years, and Michi played a major role in nurturing them. After he retired from teaching in 1993, he served for nearly a decade as an administrative officer for the Office of International Affairs. There he worked to increase our offerings in Japanese studies, establish programs with Japanese universities and build a Japanese alumni network. Over the years, he also played host to hundreds of Japanese students attending WMU and Japanese businesspersons and academics visiting our region. See <http://international.wmich.edu/content/view/741/337/> for more.

## Student News

Graduate students **Susanta Das** and **Melike Winkworth** were awarded travel grants by the Graduate College to attend the International Conference on Photonic, Electronic, and Atomic Collisions (ICPEAC) to be held in Freiburg, Germany this July. Additionally, both students have received support of 220 Euros from the ICPEAC organizers to cover their registration costs for the conference. **Buddhika Dassanayake** also received 220 Euros from ICPEAC. All three students will attend the conference and present posters on their research projects.



*Susanta Das and Melike Winkworth*

**Susanta Das** has also been invited to speak at the International Seminar on Ion-Atom Collisions (ISIAC) to be held in Crete, Greece immediately following the ICPEAC conference in Freiburg. He will present a talk on his dissertation research involving the guiding of fast electrons in insulating nanocapillaries.

**John Lighthall** and **Scott Marley** are off to spend the summer at Argonne National Lab to work on some experimental projects in nuclear physics, under the direction of Alan Wuosmaa.

Our graduate student **Mohammad Al-Amar** has a major speaking role in a recent documentary film! Local filmmakers Amy Levine and Dhera Strauss have just released their film "Donut Day", subtitled "24 Hours at Sweetwater's". {[www.donutdaydoc.com/home.html](http://www.donutdaydoc.com/home.html)} It is a montage of the customers and staff going about their business during one full day at the local donut mill. During one sequence, Mohammad is seen enjoying donuts and coffee with a group of friends, including another one of our students, **Salem Al-Faify**. Mohammad responds to the interviewer, direct to the camera, giving his comments about the atmosphere at this important local institution.

**Jamie Baran** presented a poster describing his research at the first annual "Research Day" hosted by the Graduate College, GSAC, OVPR, and the RPC of the Faculty Senate on April 20. See photos of this event at [http://www.wmich.edu/grad/research\\_day2007\\_photos.html](http://www.wmich.edu/grad/research_day2007_photos.html). Our emerging scholar, Kirk Korista, also gave a talk at this event, which took place at the Fetzer Center.

This past year we had an unusually large number of undergraduate Physics majors elected to membership in our  $\Phi$ BK chapter. WMU has sheltered a chapter of this most respected honor society since 1998, and initiates about 100 of the most promising juniors and seniors at a ceremony every April. Most years, we have had one physics major elected, but this year we had three!

The photo below shows the students at the initiation banquet along with two of our faculty who are also active in the chapter. Violeta Kovacev-Nikolic is the wife of one of our post-docs, Dragan Nikolic. In addition to his research projects, Will Johnson has also been representing the college of Arts & Sciences as one of their student ambassadors. Dan Garvin was also this year's presidential scholar in physics, and so was able to enjoy two banquets at the Fetzer Center.



*Left to right: Paul Pancella, Violeta Kovacev-Nikolic, Dan Garvin, Kirk Korista (chapter vice-president), and Will Johnson.*

# Annual Student Awards

## Spring 2007

### **George and Jean Bradley Scholarship:**

Shahin Abdel Naby

### **Haym Kruglak Graduate Student Teaching Excellent Award:**

Buddhika Senarath Dassanayake

Ravin Kodikara

### **Haym Kruglak Undergraduate Student Teaching Excellent Award:**

John Kusku

### **Leo Parpart Scholarship:**

Ileana Dumitriu

Nalaka Kodituwakku

Huaizhen Zhang

### **Nathan Nichols Scholarship:**

Daniel Garvin

William Johnson

Jesse Snyder

Kurtis Wickey

### **Paul Rood Scholarship:**

Jack Winkelbauer

### **Presidential Scholar:**

Daniel Garvin

### **Wilcox Memorial Award:**

Violeta Kovacev-Nikolic

## Recent Graduates

### B.S.

#### **April 2007**

Daniel Garvin

Nicholas Kott

Violeta Kovacev-Nikolic

John Kusku (B.A., Sec. Ed)

## Book Awards

### **Fall 2006/Spring 2007**

1000 Gregory J. Bruex

1010 Kristin Barber

1020 Carson Cornish

1040 Robert J. McMaster

Kyle A. Cronin  
1060 Evan Connell  
Kristen N. Kimble  
1070 Kristen Lambregtse  
Mallory Manderfield  
1130 Tori A. LaFleur  
Julie A. Feikens  
Ron Appleby  
Jennifer Wylie  
1150 Jordan W. Kimble  
Joshua K. Wiese  
Brent Grabowski  
2050 Gregory Chernoby  
Ryan A. Davis  
Garrett Beulle  
Nicholas K. McDermott  
2050H Ian Deming  
2070 Venkatesh Botu  
Brian Doorlag  
Minh H. Dao  
Michael A. Morris  
3090 Jack R. Winkelbauer  
Bryan A. Phinezy

## Department Roster

### Faculty

Nora Berrah  
Clement Burns  
Sung Chung  
Michael Famiano  
Thomas Gorczyca  
Dean Halderson  
Gerald Hardie (Assistant Chair)  
Charles Henderson  
Emanuel Kamber  
Asghar Kayani (Accelerator director)  
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  
Benjamin Gaudio  
Allan Kern  
Lori Krum  
Bob Scherzer  
Rick Welch

### Post-doctoral Research Associates

René Bilodeau  
Dragan Nikolic  
Zoran Pesic  
Daniel Rolles  
Ayman Said

### Graduate Students

Abdel Naby, Shahin (Egypt)  
Adams, Dan (Michigan)  
Al-Amar, Mohammad (Jordan)  
Al-Faify, Salem (Saudi Arabia)  
Ayyad, Asma (Israel)  
Baran, Jamie (Michigan)  
Cassidy, David (Michigan)  
Cipri, Robert (Michigan)  
Das, Susanta (India)  
Dassanayake, Buddhika (Sri Lanka)  
Dumitriu, Ileana (Romania)  
Durren, Michael (Michigan)  
Elkafrawy, Tamer (Egypt)  
Ganapathy, Subramanian (India)  
Garratt, Elias (Michigan)  
Ghannam, Talal (Syria)  
Giacherio, Brenna (Ohio)  
Goodman, Nicholas (Michigan)  
Grineviciute, Janina (Lithuania)  
Hasoglu, Fatih (Turkey)  
Kodikara, Ravin (Sri Lanka)  
Kodituwakku, Nalaka (Sri Lanka)  
Lighthall, Jonathan (Michigan)  
Marley, Scott (Michigan)  
Moore, Andrew (Michigan)  
Nandasiri, Manjula (Sri Lanka)  
Rai, Buddhi (Nepal)  
Vyas, Anjali (India)  
Wang, Lihua (China)  
Wang, Xue (China)  
Wei, Haipeng (China)  
Winkworth, Melike (Romania)  
Zhang, Huaizhen (China)  
Zhang, Yingfa (China)

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This edition of the newsletter was compiled and edited by Paul Pancella. Please feel free to email me with your comments or questions: [Paul.Pancella@WMich.edu](mailto:Paul.Pancella@WMich.edu)

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**

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If alumni, degree and year: \_\_\_\_\_

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# Physics Newsletter

## Yes, I want to support the WMU Department of Physics!

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