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Kip Thorne, Feynman Professor of Theoretical Physics, Emeritus, made the trek from sunny California on April 3rd to present the eighteenth entry in the Maurer Lecture Series. Professor Thorne packed Giffels Auditorium with his talk “The Warped Side of Our Universe: From the Big Bang to Black Holes and Gravitational Waves.” Thorne discussed the exotic world of warped space and time and presented graphically astounding displays of black hole behavior modeled from recent numerical simulations. Thorne also spoke about the present and future of gravitational wave astronomy.

After the lecture, Thorne took questions from the audience. A queue then formed as spectators eagerly approached with books and cameras in hand, wanting an autograph for their copy of Black Holes & Time Warps, as well as a picture or two with the eminent physicist.

Professor Thorne didn’t come to Fayetteville just to give a lecture. He spent some time catching up with one his former students, our department’s own Daniel Kennefick. That morning he also met to take questions from interested graduate and undergraduate students. Undergraduates asked about Professor Thorne’s work in theoretical physics, but were also curious about scientific outreach, the late Carl Sagan (a close friend Thorne’s), and Thorne’s work on the upcoming Steven Spielberg film, Interstellar.
We said goodbye to an exceptional group of students this May. Each student will be missed and we hope each takes his or her physics degree and uses it as a key to a successful future.

- **Matt Robinson**: Matt will attend graduate school in mathematics at the University of Washington.

- **Amee (AJ) Salois**: AJ earned Summa Cum Laude honors and will go to work at the International Dark-Sky Association -- her dream job.

- **Thomas Rembert**: Thomas earned Summa Cum Laude honors, an NSF Graduate Fellowship, a Department of Energy Office of Science Graduate Fellowship, and a National Defense Science and Engineering Graduate Fellowship. He will attend UC-Berkeley in electrical engineering.

- **Thomas Ivanoff**: Tom earned Summa Cum Laude honors and will attend the University of Texas - Austin in mechanical engineering.

- **William Lewis**: William earned Summa Cum Laude honors and won a Goldwater Scholarship. He will attend graduate school in physics at the University of Colorado - Boulder.

- **Andrew Bobel**: Andrew earned Summa Cum Laude honors and will attend graduate school in materials science at Northwestern.

- **Derrek Wilson**: Derrek earned Magna Cum Laude honors and received an honorable mention for the NSF Graduate Fellowship. Derrek will attend graduate school in physics at Kansas State University.

- **Aisha Mahmoud**: Aisha earned Cum Laude honors and won a Goldwater Scholarship. She will teach English in Spain for a year before entering graduate school in astronomy.

- **Cameron Cook**: Cameron plans to spend one year as an intern in preparation for entering graduate school in biological engineering.

- **Cedric Horvath**: Cedric will enter graduate school in the microEP program at the University of Arkansas.

- **Ben Lewis**: Ben plans to move to Oregon and take classes at the University of Oregon in preparation for entering a graduate program in atmospheric science.

- **Christine Stith**: Christine plans to enter the Masters of Arts in Teaching program at the University of Arkansas.

- **Andrew Ferguson**: Andrew plans to move to North Carolina and pursue a career in industry.

- **Taylor Hampton**: Taylor plans to enter the Masters of Arts in Teaching program at the University of Arkansas.

- **Josh Bacon**: Josh plans to continue his teaching with Kaplan and prepare for medical school.

- **Stephen Sheeks**: Stephen plans to work for the Department of Defense while pursuing an advanced degree.

- **Joe McClain**: Joe plans to enter the Master of Arts in Teaching program.

- **Jeremy Massey**: After a year off to be with family, Jeremy plans to enter graduate school in physics.

- **Thomas Stinnett**: Thomas plans to go to work in industry.

- **Sarah Withem**: After a year to complete her transition from mechanical engineering, Sarah plans to attend graduate school in physics.

- **Nathan Willems**: Nathan plans to enter the microEP program at the University of Arkansas.

- **Jesse Buffington**: Jesse completed the final class for his physics major and has been working as a mechanical engineer at NASA.

- **Christopher Cox**: Chris commissioned as an officer in the Air Force.

- **Nathan Richards**: Nathan is working as a mechanical engineer in industry.
The physics department had its most successful year ever at the honors award ceremony with students winning five Summa Cum Laude awards, one Magna Cum Laude award, and one Cum Laude award. A photograph of the students at the reception after the ceremony is shown below.

From left to right: Thomas Rembert (Summa), Dr. Salamo, Andrew Bobel (Summa), Dr. Lacy, AJ Salois (Summa), Thomas Ivanoff (Summa), Dr. Stewart, Dr. Vyas, William Lewis (Summa), Dr. Singh, Derrek Wilson (Magna). Not shown Aisha Mahmoud (Cum Laude).
The physics department had another very strong showing in state and nationally competitive awards this year.

Thomas Rembert and Scotty Bobbitt won National Science Foundation Graduate Fellowships with Derrek Wilson receiving an honorable mention. Thomas also won a Department of Energy Office of Science Graduate Fellowship and a National Defense Science and Engineering Graduate Fellowship.

Kristin Kovach won an EPSCoR Research Fellowship.

Tyler Scogin won a NASA Undergraduate Student Research Program internship.

Juan Aguilar, Kristin Kovach, Justin Norman, Jordan Stone, and Matt Hartley won positions in the National Science Foundation’s Research Experiences for Undergraduates program.

Mathias Bellaiche, Justin Norman, and Matt Robinson won State Undergraduate Research Grants (SURF). Mathias Bellaiche was also selected to spend a year studying at Cambridge.

Some of the award winners are shown below.
The physics department held its annual Sigma Pi Sigma induction ceremony on May 27th, 2012. Another exceptional class of students was inducted into the physics national honors society. A picture of the new inductees is shown below.

From left to right: Jesse Buffington, Christina Stith, Cedric Horvath, Stephen Sieck, Lucas Brown, Derrek Wilson, and Cameron Cook. Not shown: Raymond Walters and Kristin Kovach.
Each year, since 2010, Conferences for Undergraduate Women in Physics are held simultaneously at different schools across the nation. The goal of the conferences is to encourage undergraduate women to continue to study physics by providing them with information about academic and professional opportunities in physics as well as access to other women at various stages in their careers with whom they can share experiences and advice.

This year, I attended the Southeastern Conference for Undergraduate Women in Physics from January 12-16 at the University of Tennessee in Knoxville. Other conferences took place at Case Western Reserve University, Stanford University, Texas A&M University, University of Washington, and Yale University.

I wanted to attend a professional physics conference, and this one interested me especially so that I could hear from more female physicists about their career and education paths.

About 130 students from 50 institutions gathered in Knoxville. There were panel discussions on topics including: the status of women in physics, graduate school, undergraduate research, careers options, and minority women in physics. Guest speakers discussed their various career paths, including jobs outside of academia. There were also sessions for students to present posters and give talks about their research projects.

A highlight of the conference was a visit to Oak Ridge National Laboratory (ORNL). ORNL was established in 1943 as part of the World War II Manhattan Project. Today, it is the largest science and energy laboratory in the Department of Energy system. As part of the visit, we toured the Oak Ridge Leadership Computing Facility, Graphite Reactor, and the Spallation Neutron Source, and we attended a lunch and panel discussion. The Computing Facility houses one of the most powerful scientific computing systems in the world. The Graphite Reactor was used for enriching uranium in WWII and is now a historical landmark and museum. The Spallation Neutron Source is an accelerator neutron source that creates the most intense pulsed neutron beams in the world for the purpose of scientific research. The visit helped me to better understand what it would be like to work at a national lab, but I also learned that ORNL has many undergraduate and graduate research opportunities, including joint programs with the University of Tennessee.

The University of Tennessee volunteers did an excellent job organizing the event, which also included lodging and meals. I am very happy with my experience, and I would highly recommend the conference to others.

For more information about past and future conferences, visit the American Physical Society’s webpage http://www.aps.org/programs/women/workshops/cu-wip.cfm. Next year’s Southeastern Conference will be at the University of Central Florida. The conferences are generously supported by the host institution, the National Science Foundation, and the Office of Science in the Department of Energy. I am very thankful to this year’s sponsors and volunteers, as well as to our own Physics Department, which supported my travel.
On February 17th, nine members of the Society of Physics Students (SPS) volunteered at a Cub Scouts / Webelos Scouts event at Jerry “Pop” Williams Elementary School in Farmington. The volunteers set up and led hands-on learning stations, which included: electromagnets, a Van de Graaff generator, vibrating strings, chladni plates, and a ring launcher. The Scouts were eager to participate and had a great, physics-filled evening.
Announcements

UTeach Program Starts
Fall 2012

Thinking about becoming a physics teacher? The Governor of Arkansas instituted a new initiative to allow math and science majors to graduate with a BA or BS degree AND earn a teaching license in 4 years. This new program, called UTeach Arkansas, is being led by Dr. Gay Stewart.

For more information, visit http://uteacharkansas.uark.edu/.

Stay connected to SPS updates on our Facebook page: Society of Physics Students - University of Arkansas.

Congratulations to Our New SPS Officers!

Thank you to our 2011-2012 Society of Physics Students (SPS) officers, and congratulations to our new officers, including:

President: Wes Clawson
Vice President: Jordan Stone
Treasurer: Zach Ritchie
Secretary: Mark Bush
Newspaper Editor: Jennifer Stabach
Activities Coordinator: Matt Hartley
Outreach Coordinator: Kendall Dix & Zach Callahan
Library Officer: Caleb Heath

Sponsor: Dr. John Stewart

For more information about SPS, email socphys@uark.edu.