

Student Notes

Three undergraduate students, **Pat Berryhill**, **Josh Gary**, and **Brad White**, were invited to present their Advanced Laboratory research at the 1997 Midwest Student Conference of the American Nuclear Society. Their research was on the optical properties of F-centers in alkali-halide crystals.

Mike Pinkerton presented a talk on his Advanced Lab scanning tunneling microscope at the American Association of Physics Teachers 1997 summer meeting in Denver, Colorado. Mike was the only undergraduate to present a paper in the undergraduate research session; all of the other presentations were made by professors.

All physics majors who graduated in May, 1997, graduated cum laude or better. Three students, **Hal Burch**, **Shella Keilholz**, and **Kevin Moll**, graduated summa cum laude and three more, **Pat Berryhill**, **Josh Gary**, and **Brad White**, graduated magna cum laude.

In an effort not to be outdone by the graduating seniors, seven of the fifteen physics freshmen who came in the fall of 1997 got perfect grades, 4.0, their first semester. Several others got only one B. The Physics Department has been able to attract truly outstanding students.

Two undergraduates, **James Dent** and **Chris Maloney**, carried out research under the supervision of **Don Madison**. **James** and **Chris** had their research published in the *Physical Review* and the *Journal of Physics*. The results of their research were presented at conferences in Washington, D.C.; Vienna, Austria; and Argonne National Laboratory.

Ryan Feeler had two papers published describing his undergraduate research. The papers were published in *The Physical Review* and *Nuclear Instruments and Methods*. **Ryan** did his research under the supervision of Prof. **Ron Olson**.

Physics major **Mike Pinkerton** from Kennedale, Texas, was appointed as one of two marshals for the College of Arts and Science at the 1997 fall commencement. Marshall appointments are based on highest student grade point at graduation. Mike graduated summa cum laude.

The first "perfect" SAT student at UMR is a current physics freshman. **Sean McKinney** got a 1600 on the SAT exam as a high school junior and came to UMR last August as a physics freshman. Sean is only the third "perfect" student (the other two had perfect ACT scores) to attend UMR. All three have been physics majors. We have attracted one "perfect" student every other year since 1993!

Shella Keilholz received a three-year, \$54,000 Department of Defense Fellowship to attend graduate school at the University of Virginia, where she plans to pursue a Ph.D. in medical physics.

Three undergraduate students, **Ryan Feeler**, **Seth Root** and **Kari Wojtkowski**, spent their summer doing research under the supervision of Prof. **Ron Olson**. All three students had their research supported by a grant from the Department of Energy.

Graduate Awarded National Fellowship

Shella Keilholz (BS '97) of Frankenstein, MO, was awarded a three-year Department of Defense Fellowship last spring shortly before her graduation from UMR last May. The fellowship includes \$54,000 in stipends plus tuition. Shella began graduate studies at the University of Virginia last fall where she plans to pursue a PhD in medical physics.



Shella Keilholz

Keilholz is one of 90 new students to receive the NDSEG Fellowship from the Department of Defense National Defense and Engineering Graduate Fellowship Program. Fellowships are awarded to "individuals who have

demonstrated ability and special aptitude for advanced training in science and engineering." The program is sponsored by the U.S. Army, Navy and Air Force.

The Department of Defense will pay Keilholz's tuition and fees (excluding room and board) and will provide the following stipends: \$17,000 for 1997-98; \$18,000 for 1998-99; and \$19,000 for 1999-2000.

Shella was the first perfect (ACT of 36) student to come to UMR. She was one of three students who created a scanning tunneling microscope (STM) using \$70 in expenditures and ordinary laboratory equipment. A scanning tunneling microscope takes pictures of individual atoms that make up the surface of a solid. Commercial versions cost thousands of dollars. Among their many uses, STMs are used to study bacteria, semi-conductors and computer chips.

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