

SPS Zone 3 and 7 Meeting Report

Juniata College, Huntingdon, PA

October 19 – October 20, 2007

The 2007 Fall Society of Physics Students meeting for Zone 3 and 7 was held at Juniata College in Huntingdon, Pennsylvania on the weekend of Friday, October 19 and Saturday, October 20. The official meeting started with a roundtable discussion with Dr. James Kakalios, Professor of Physics and Dean of Undergraduate admissions at the University of Minnesota. Dr. Kakalios is the author of the highly acclaimed book *The Physics of Superheroes*. SPS members were able to talk personally with him on topics ranging from the physics of brain-wave patterns and amorphous silicon to processes that students should go through in preparation for graduate school.

Following the discussion, a welcoming dinner was held to allow both the faculty and students to meet SPS members from all over the Eastern United States, discuss physics and generally have a good time. The dinner featured a “get to know you” game in which students mingled around trying to learn about people by filling out a grid with different traits and abilities listed on it.

After the dinner Dr. Kakalios gave an exciting and enthusiastic presentation to SPS members, and members of the Juniata campus and community alike, entitled “The Physics of Superheroes.” In his presentation, Dr. Kakalios, a comic book enthusiast, explained the physics behind the superpowers of comic book superheroes. While some superpowers do not obey the laws of physics, many superpowers do. In fact, Dr. Kakalios himself said that “comic books get their physics right more often than you think.” The talk primarily focused on how superheroes obey or violate the laws of mechanics; however, Dr. Kakalios showed that some areas such as atomic physics, quantum physics, and special relativity can also be found in simple everyday comic books. Dr. Kakalios was able to take the very difficult and complex subject of physics and made it into something that is fun and enjoyable to learn. After the talk he graciously agreed to sign copies of his book, *The Physics of Superheroes*, for the audience. The talk went over so well that we actually sold all copies of the book we had on hand!

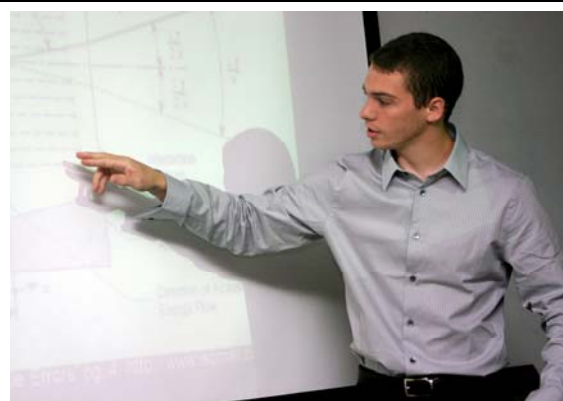
On Saturday, the events continued with an early breakfast followed by student talks and a lunch poster session where students could make connections and recognize the work of fellow undergraduates in physics. Topics ranged from astrophysical jets to nonlinear pendulum systems. Meeting new people working in a wide spectrum of physics research exposed students to the wide range of research opportunities and provided general information about new and exciting areas of research.

Attendees had the unique opportunity to hear two medical physicists, A.J. Jones and Vincent Meier, from Geisinger Health in Danville, Pennsylvania. They discussed the opportunities available in the growing (and lucrative) field of medical physics. It was interesting to see how physics majors can become involved in the medical field without attending medical school. Drs. A.J. Jones and Vincent Meier gave a detailed synopsis of the history and future of medical physics while discussing their training and the day-to-day work of a medical physicist. At the conclusion of the presentation, students and faculty gathered together for lunch and a final wrap up of the joint Zone 3 and 7 session and physics textbooks were raffled off, making a fun ending to a great weekend of physics.

In the end, the SPS meeting provided valuable lessons and lectures combined with a way to meet other physics students and professors from all over the Northeastern United States. The SPS meeting brought many people together to not only provide insight on their own physics research but also learn from other physics students and professors (not to mention a world famous author).



Dr. James Kakalios, Professor of Physics and Dean of Undergraduate admissions at the University of Minnesota, leads a round table discussion on *The Physics of Superheroes*.



Dan D'Orazio, Juniata College.