An impressive body of work

CMU's new lab director has studied Olympians

By EMILY SHOCKLEY
Emily.Shockley@gjsentinel.com

DEAN HUMPHREY/The Daily Sentinel

Gerald Smith is the new director of the Monfort Human Performance Laboratory at Colorado Mesa University. Smith took over as director of the human performance lab July 2.

A professor of biomechanics in the Monfort Family Human Performance Lab is like a kid in a candy store.

Some universities have a few of the motion capture, body composition, aerobic performance and health assessment tools that are stationed around the lab at Colorado Mesa University. But few have all of those tools in one place, according to the lab's new director, Gerald Smith.

"This facility, having the tools it does, is not very common. I feel very lucky," Smith said.

Smith took over as director of the human performance lab July 2. He replaced Bill Sands, the former head of sport biomechanics and engineering and the Recovery Center at the Colorado Springs Olympic Training Center. Sands served as lab director for two and a half years after it opened in the fall of 2009.

Smith has a history with the Olympics as well. He conducted research on everything from the effect of fatigue on a marathon runner's stride to the most effective techniques for cross-country skiers at the Olympic games in Seoul, South Korea; Albertville, France; Barcelona, Spain; Lillehammer, Norway; and Nagano, Japan.

He decided while in Lillehammer that Norway would be a fun place to live someday, so he jumped at the chance to work at the Norwegian University for Sports Science. He spent seven years at the university studying athletes, some from the Olympic training center connected to the school, before taking a job at Utah State University in Logan. Smith worked as a professor of biomechanics at Utah State from fall 2008 to spring 2012.

Smith served as a high school math and science teacher for the first 10 years of his career before attending graduate school at Pennsylvania State University. After earning his PhD, Smith joined the faculty at Oregon State for 13 years before going overseas.

Smith specializes in studying skiers and, as a biomechanical scientist, loves analyzing athletic movements through motion capture technology in the human performance lab to see how athletes can improve their performance. He plans to work with students, who can undergo performance tests in the lab for free, and community members, who must pay a fee to use the lab, but also hopes to continue his own research while directing the lab.

Smith works part-time as a research fellow with the Swedish Winter Sport Research Center at Mid-Sweden University and is hoping to find funding to collaborate on a study that would look at the cumulative effect of slalom skiers being hit in the head by spring-loaded gates that pop up after a skier hits them along a course.

"The impacts are not so large, but frequent. No one's really looked at that," Smith said.

Smith will teach a research course this fall and teach a class in biomechanics next spring. He said he wants local K-12 students to come to the lab as well. He hopes the tools at the lab will entice them to enter careers in science.