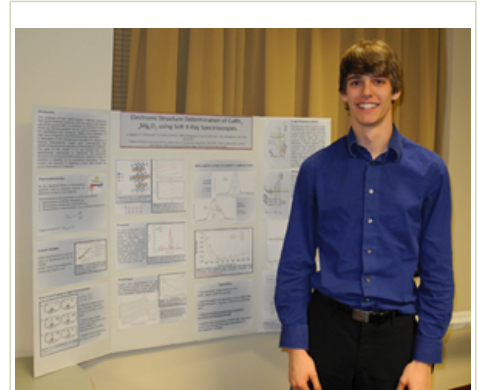


Martin Claims TAAPT Poster Prize/EURECA Honors

April 11, 2011

Undergraduate Physics Major Eric Martin took first place in the Student Poster Presentations at the 2011 Annual Meeting of the Tennessee Section of the American Association of Physics Teachers (TAAPT), held March 25 and 26 at The University of the South. His poster, "Electronic Structure Determination of the Thermoelectric $\text{CuRh}_{1-x}\text{Mg}_x\text{O}_2$ using Soft X-Ray Spectroscopies," along with his explanation of the work, was judged the best among the 11 college entries (TAAPT also awards a prize to a high school student).

Using several soft x-ray spectroscopies, Eric helped determine that the states involved in transport are rhodium derived, providing a sharper focus on the microscopic description of thermopower. Indeed, this is an important result, as it establishes that the particular structure of the ion d6, which is common to Cobalt and Rhodium atoms, is likely to be intimately connected to the occurrence of high thermopower in oxides. Eric works with Dr. Norman Mannella's research group, which studies complex electron systems, novel materials, and light-matter interaction and physics of the fundamental processes, among other areas.



Eric Martin with his prize-winning poster.

Just one week later, Eric presented this work at EURECA, the university's Exhibition of Undergraduate Research and Creative Achievement, where he was named a winner in the College of Arts and Sciences Physical Sciences Division. He is also a recipient of the William Bugg Physics Scholarship, which was funded by the physics faculty to honor long-time department head Bill Bugg and to support undergraduate physics education at UTK.