

University of Nebraska-Lincoln

# ASTRONOMY EDUCATION WORKSHOP

<http://astro.unl.edu>



(Saturday, October 7, 2006 — Avery 19, UNL City Campus)

This event is free to high school and college astronomy/physics instructors and undergraduate students interested in careers in science education. Please register in advance by phone at 402-472-9312 or by email at [spenry2@unl.edu](mailto:spenry2@unl.edu). This workshop has three goals: 1) to acquaint educators with innovative usages of instructional technology in astronomy education, 2) to bring together members of the astronomy and physics teaching community to share ideas and identify potential collaborators, and 3) to promote new developments in the UNL Department of Physics and Astronomy.

## Workshop Agenda

- 9:00 am Welcome
- 9:10 am Presentation: “**Planet Formation: A Byproduct of Star Formation**” (Avery 19)  
Dr. Terry Teays (Maryland Space Grant Consortium)  
*Abstract: The discovery of a large number of planetary systems orbiting other stars has sparked a whole new interest in the process of forming solar systems. I will first spend some time discussing the current insights into the process of star formation, with special emphasis on results from space missions. Then I will examine the consequences of this information, coupled with the latest information about extra-solar planets, to discuss the current state of our knowledge of how planetary systems form. Finally, I will discuss the NASA Kepler mission to search for extrasolar planets, with some comments about the dividends for stellar astronomy.*
- 10:00 am Hands-on Activity: “**Applying Statistics to the Hubble Deep Field Images**” (Avery 19)  
Dr. Terry Teays (Maryland Space Grant Consortium)  
*Abstract: We will examine an online interdisciplinary activity which uses the Hubble Deep Fields (North and South) to teach students about the basic statistical concepts of bias and the effects of sample size on obtaining accurate predictions. Essential content knowledge will be covered, along with typical student misconceptions. The participants will have the opportunity to try out the activity and to discuss how it can be used in the classroom.*
- 12:00 pm Lunch (Selleck Hall Cafeteria — President’s Room)
- 1:00 pm Computer Simulations: “ExtraSolar Planet Detection” (Avery 19 — move to Avery 12 & 16)  
Ed Schmidt (UNL), Adam Davis (UNL), Chris Siedell (UNL), & Dave Kriegler (UNO)
- 2:30 pm Peer Instruction Demonstration: “ClassAction—ExtraSolar Planet Module” (Avery 19)  
Todd Young (Wayne State College) & Kevin Lee (UNL)
- 2:55 pm Wrap-up and door prize raffle (must be present to win!)

This workshop is sponsored by the UNL Center for Science, Mathematics, and Computer Education and the UNL Department of Physics and Astronomy. Numerous educational materials, continental breakfast, and lunch are provided and reimbursement will be made for travel costs up to \$50. The University of Nebraska–Lincoln does not discriminate based on gender, age, disability, race, color, religion, marital status, veteran’s status, national or ethnic origin, or sexual orientation.