JESSE HOSTETLER:
Oregon State University, Electrical Engineering and Computer Science

Degrees:
B.S. in Computer Science and Psychology, University of Nebraska-Lincoln

Scholar Donors:
Caron and Larry Ogg

About the Scholar:
Jesse is studying abstraction in automated decision-making, within the broad field of artificial intelligence. Abstraction is a general technique for reducing the size of problems by reasoning about them at a "higher level". For example, when traveling by car we think about highways and exits, not latitude and longitude. Jesse's research focuses on mathematical theories of what makes abstractions "good", and on algorithms for discovering abstractions automatically. In his free time, he plays guitar, board games and card games, and enjoys the outdoors.

Benefits to Society:
Proper abstractions allow artificial intelligence techniques to solve large optimization problems, enabling us to make better decisions in a wide variety of areas. Examples studied at Oregon State include planning for forest conservation and invasive species management, coordinating fire department responses, and playing wargames. Advances in artificial intelligence also help us better understand how humans and animals think and learn.

Publications and Posters:
Brian King, Alan Fern, & Jesse Hostetler (2013). On adversarial policy switching with experiments in real-time strategy games. In *The International Conference on Automated Planning and Scheduling (ICAPS).*

Jesse Hostetler, Ethan Dereszynski, Tom Dietterich, & Alan Fern (2012). Inferring strategies from limited reconnaissance in real-time strategy games. In *The Conference on Uncertainty in Artificial Intelligence (UAI).*

Ethan Dereszynski, Jesse Hostetler, Alan Fern, Tom Dietterich, Thao-Trang Hong, & Mark Udarbe (2011). Learning probabilistic behavior models in real-time strategy games. In *The AAAI Conference on Artificial Intelligence and Interactive Digital Entertainment (AIIDE).*