

## Distinguished Lectures

Fall 2016



Colorado State University's Information Science and Technology Center (ISTeC) presents two lectures by

### Dr. David Shaffer

Vilas Distinguished Achievement Professor of Learning Science  
Department of Educational Psychology  
University of Wisconsin-Madison

### ISTeC Distinguished Lecture

In conjunction with the School of Education, Department of Electrical and Computer Engineering, and Department of Computer Science Seminar Series

#### ***"Quantitative Ethnography: Measuring Complex Thinking Using Grounded Data Mining"***

**Monday, Dec. 5, 2016**

**Reception with refreshments: 10:30 a.m.**

**Lecture: 11:00 a.m.-12:00 noon**

**Morgan Library Event Hall**

School of Education, Department of Electrical and Computer Engineering, and Department of Computer Science Special Seminar *Sponsored by ISTeC*

#### ***"Epistemic Network Analysis (ENA)"***

**Tuesday, Dec. 6, 2016**

**Lecture: 2:00-3:00 p.m.**

**Tilt 104**

#### **Abstracts**

##### ***Quantitative Ethnography: Measuring Complex Thinking Using Grounded Data Mining***

In the age of educational games and the Big Data they generate, we have more information than ever about what students are doing and how they are thinking. But the sheer volume of data available can overwhelm traditional qualitative and quantitative research methods. Quantitative Ethnography is a set of research methods that combine ethnographic techniques with statistical tools—a way to go beyond looking for arbitrary patterns begin generating meaningful insights about learning at scale. This talk provides an overview of the science of Quantitative Ethnography and a preview of two key tools that researchers can use to assess complex thinking.

##### ***Epistemic Network Analysis (ENA)***

Learning in the 21st century means thinking in complex and collaborative ways that are situated in a real world context. David Shaffer will introduce Epistemic Network Analysis (ENA), a tool for modeling complex thinking. A central premise of ENA is that complex thinking is characterized by a network of connections in a domain. Originally designed to assess epistemic frames, collections of skills, knowledge, identities, values, and ways of making decisions, in virtual game environments, ENA is now being used broadly to quantify the structure of connections that constitute complex thinking in large-scale datasets and logfiles of many kinds, including but not limited to chat, email, and actions online.

#### **Speaker Biography**

David Williamson Shaffer is Professor of Educational Psychology at the University of Wisconsin and Director of the Epistemic Games Group in the Wisconsin Center for Education Research. Shaffer studies how new technologies change the way people think and learn, and he is the author of *How Computer Games Help Children Learn*.

To arrange a meeting with the speaker, please contact Prof. James Folkestad, 970-491-7823, (James.Folkestad@ColoState.EDU)