

# AERA 2011 – Chaos & Complexity Theories SIG

## Friday, April 8

### Chaos and Complexity Theories: SIG Business Meeting and Conversation. The State of Complexity

Friday, April 8 6:15 pm – 8:15 pm Astor Crowne Plaza / Astor Ballroom III

**Chair:** *Bernard Ricca* (St. John Fisher College) **Participants:** *William Doll* (Louisiana State Univ.)  
*Deborah Osbert* (Univ. of Exeter)

Panel and fireside chat about the state of the SIG and the state of complexity in educational research.

## Saturday, April 9

### Complexity in Thinking, Conversation, Knowledge, and Democracy

Sat, Apr 9 12:25pm - 1:55pm Astor Crowne Plaza / Astor Ballroom II

**Chair:** *William E. Doll* (Louisiana State Univ.) **Discussant:** *M. Jayne Fleener* (Louisiana State Univ.)

#### Authoritative Knowledge, Higher Education, and Democracy

- *Deborah Osberg* (University of Exeter)

#### Complex Conversations: Rigorous, Relevant, Rich, and Relational Moments of Learning

- *Sarah Smitherman Pratt*
- *Donna Trueit*

#### The Promise of New Thinking in Complexity for Education

- *Ton Jorg* (Utrecht University)

### Chaos and Complexity Theories: SIG Roundtable Session 21

Saturday, April 9 2:15 pm – 3:45 pm Sheraton / Grand Ballroom E

**Chair:** *Jens Rasmussen* (Univ. of Aarhus)

#### Illustrating the Fractal Geometry of Campuses

- *Michelle Johanna Nilson* (Simon Fraser University)

#### Network Structure Analysis for Knowledge Building: A Macroscopic View of Collaborative Learning Discourse

- *Jun Oshima* (Shizuoka University),
- *Ritsuko Oshima* (Shizuoka University),
- *Yoshiaki Matsuzawa* (Shizuoka University),
- *Jan C. Van Aalst* (University of Hong Kong),
- *Carol K. Chan* (University of Hong Kong)

#### Pedagogy of Attentiveness: Revitalizing the Commons

- *Randa Khattar* (York University)

### Weaving a Tapestry: Metaphors, Models, Methods, and More

Sat, Apr 9 4:05pm - 6:05pm Astor Crowne Plaza / Astor Ballroom III

**Chair:** *Bernard Ricca* (St. John Fisher C.) **Discussant:** *Sherrie B. Reynolds* (Texas Christian Univ.)

#### What's a Meta for?

- *William E. Doll* (Louisiana State University)

#### Modeling and Complexity

- *Michelle Jordan* (Arizona State University)

#### Research Methods in Complexity Theory: Redefining the Spaces of Methodology in Educational Research

- *Donald L. Gilstrap* (University of Oklahoma)

#### Multidisciplined Interdisciplinarity: Paradigms for Educational Research

- *M. Jayne Fleener* (Louisiana State University)

#### Mattering Complexity

- *Donna Trueit*

#### Inspiration, Improvisation, and Ongoing Interrogation: Theorizing Method and Rigor for Complexity-Based Educational Research

- *Deborah Seltzer-Kelly* (Southern Illinois University)

**Abstract:**

Beginning with a presentation of some major approaches to complexity in education, this symposium focuses on the interplay of seemingly disparate stances towards complexity in an effort to both make the strengths of each approach clearer and to create a richer understanding of complexity. By considering five approaches to complexity – metaphor, models, methods, multidisciplinary and meta-theory – this session will create a shared understanding of complexity that is less nebulous than the current practice while at the same time providing a richer understanding of complexity. By viewing the various approaches towards complexity as strands with which to weave, and then looking at the relationships among the various strands, a richer tapestry will emerge from the conversation between the approaches.

**Session Summary****Objectives**

This symposium focuses on the interplay of seemingly disparate stances towards complexity in education. The objective is to begin with some of the major approaches to complexity and look at a picture that can be formed by their relationships to each other.

**Overview**

Beginning with six different approaches to complexity in education – metaphor, models, methods, multidisciplinary, mattering, and meta-theory – the session will explore the interplay of these ideas in an effort to both make the strengths of each approach clearer and to create a richer understanding of complexity. Each presenter will author a paper explicating one of these six approaches to complexity, and the session will work to weave these approaches together as strands of a weaving.

**Structure of Session**

After an introduction by the chair, each presenter will have five minutes to present an overview of her or his stance towards complexity. The discussant/respondent will provide her remarks, and then all attendees will participate in a conversation that explores the connections between the various stances.

**Significance**

Currently there is no single accepted definition of complexity (Mitchell, 2009). In recent discussions among the presenters of this session and others, there is some thought that such a single definition is perhaps undesirable. (Capra et al, 2007) However, accepting this premise makes research in complexity, and the Chaos & Complexity Theories SIG, problematic: Without the constraints imposed by a clear definition, it is difficult to delineate what qualifies as complexity research and what does not. This situation may be partly to blame for allowing the situation noted by Paley (2007): Old linear ideas masquerade in new complexity words without really being complex.

Rather than retreat to a single uniform conception (or closely-held competing conceptions) of complexity, however, in response to the difficulty of working with complexity this session will take a different approach. The session will be an exercise in creating a shared understanding of complexity that is less nebulous than the current practice while at the same time providing a richer understanding of complexity. By viewing the various approaches towards complexity as strands with which to weave, and then looking at the relationships among the various strands, a richer tapestry will emerge from the conversation between the approaches.

**Sunday, April 10****Chaos and Complexity: SIG Roundtable Presentation Session 36**

Sun, Apr 10

2:15pm - 3:45pm

Sheraton / Grand Ballroom E

**Chair:** *Donald L. Gilstrap* (University of Oklahoma)**Emergent Complexities of Implementing Democratic Practices in the Classroom: Exploring Interactions Between Teacher and Student**

- *Serina A. Cinnamon Morrison* (Southern Illinois University - Carbondale)

**Enacting Curriculum: A Complexity Perspective on Teachers' Descriptions and Interactions**

- *Lindsay Hetherington* (University of Exeter)

**Questioning the Modern Conception of Time: The Politics of Complexity Reduction in Education**

- *Anneli K. Frelin* (Uppsala University),

- *Jan Grannas* (University of Gavle)

**Relationships, Systems, and Complexity: An Examination of Social Imagination in Classroom, School, and University Communities**

- *Jeffrey W. Bloom* (Northern Arizona University)