Integrating Art and Science Through Visualization

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Goals for the Session

- Introduce you to the conference
- Encourage you to attend (or send someone!)
- Gather ideas for possible speakers
- Discuss how to better integrate artists in this community
GRC History

- Community-organized
- GRC on Visualization in Science and Education - Started in 1994 - focused on Chemistry
- Evolving and growing ever since
- Interesting Format
- Pre-Conference Workshop and Mini-grants
2011 Themes

Transformation by Visualization: Radical Effects on Learning in Science and Across Education

• Spanning the (Visualization) Space: Genomes, Learning & Culture

• Virtual Environments, Games & Simulations

• Transforming Education with Visualization

• Merging Art & Science

• Revealing Unseen Complexity

• Neuroscience, Attention & Magic

• Networked, Immersive, and Contextualized Learning

• Sustainability and the Role of Visualization
Figure 12. Density surfaces derived from a single, two-dimensional, spring configuration.
2013 Themes

Evolving Roles for Visualization in Science and Education

- Complexity in Visualization
- Visualization in Mobile Environments
- Visualization & Tools: Research and Applied
- The evolving role of visualization in the teaching of STEM
- Role of visualization in communicating complex science to the public
- Augmented reality and other modes of visualization
- Visualization in the (scientific) workplace
2015 Themes

Grand Challenges in the Use of Visualization

• What Technical Limits/Challenges Remain in Scientific Visualization?
• How to Best Integrate Visualization in Education?
• What are the Special Challenges in Visualizing Large Datasets (“Big Data”)?
• How Do We Assess the Impact of Visualization and How Does Visualization Allow New Modes of Assessment?
• What Are the Best Practices in Communication Using Visualizations
• What Do Student-Created Visualizations Reveal About Student Understanding and How Do They Support It?
• What Principles Guide Artistic vs. Scientific Visualization?
Prior Speakers

- John Maeda (then at RISD)
  - Design, Data, Decisions

- Larry Gonick (Independent Cartoonist)
  - Something for Nothing: Creative Removal of Inessential Information

- Graham Johnson (Scripps)
  - Towards Molecular Cinematography

- Mark Ballora (Penn State)
  - Seeing with Your Ears: Visualizing Data with Sound
Discussion

- How to publicize the meeting?
- How to draw more artists/designers?
- Speakers?

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