



## Randomness and Generative Art

James Parker

Department of Art, University of Calgary, Canada

### Abstract:

Art in general can be thought of as a stochastic process. No two drawings or paintings are exactly alike, and cannot be as long as humans are involved. Generative art, the defining of an artwork using an algorithm, can result in very precise duplications of artworks but this is rarely interesting. Art is a human activity and artworks are a means of communication between humans, even in the generative domain. Adding randomness to a generative work makes it seem more human, and often more interesting. How much randomness should there be? What is the context of the random features? Why is randomness interesting? These things will be discussed, along with some ideas on how to use randomness as a tool in creating artworks.

### Biography:

JAMES PARKER is director of MinkHollow Media and Professor of Art Digital Media Laboratory, University of Calgary, Canada. He has degrees in Applied Mathematics, Computer Science (MSc) and Informatics (PhD, Universiteit Ghent with greatest distinction, 1998). He has been a Full Professor of Computer Science, a professor of Drama, and a professor of Art in a 40-year career in academia. He has published over 170 technical articles on simulation, video games, computer



vision, and artificial intelligence. He is also the author of 12 books, including the most recent one "Generative Art: Algorithms as Artistic Tool".

### Publication of speakers:

1. Parker J et al; Imitation as a mechanism of cultural transmission, *Artif Life*. 2010 Winter;16(1):21-37. doi: 10.1162/artl.2009.Marriott.014.
2. Parker J et al; The Booze Cruise: impaired driving in virtual spaces, 1 November 2005 *IEEE Comput Graph Appl*. 2009 Mar-Apr;29(2):6-10. doi: 10.1109/mcg.2009.34
3. Parker J et al; A Satellite for Artistic Purposes: RumbleSat I, Conference Paper, Nov 2016
4. Parker J et al; Animated Lightning in Video Games, Conference Paper, Jun 2016
5. Parker J et al; ViPER : Game That Teaches Machine Learning Concepts - A Postmortem, October 2014