## GA2018 – XXI Generative Art Conference

TITLE: Generative Plant Structures – Frozen Flowers (Interactive Artwork)

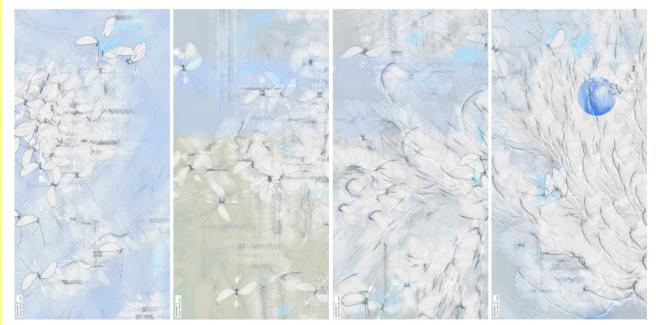


Topic: computational art, evolutionary algorithms, artificial life.

Author: Daniela Sirbu, Ph.D. Associate Professor Department of New Media University of Lethbridge Canada daniela.sirbu@uleth.ca

## Abstract

*Frozen Flowers* is part of the larger series *Generative Plant Structures*. It is a computational art piece created in interaction with an artificial life system developed by the artist. When working autonomously, this system evolves agent behaviour as expressed through motion so that traces generated by the multi-agent system tends to create visual structures organized in compositions with aesthetic value. The *Frozen Flowers* series evolves new life-like forms from abstract shapes by grouping them in time through algorithms loosely based on a combination of structure creation processes that occur in nature.



Frozen Flowers. Still frames captured from artificial life system developed by Daniela Sirbu.

Email: daniela.sirbu@uleth.ca	<ul> <li><i>Key words:</i> computational art, evolutionary algorithms, artificial life, computational creativity.</li> <li><i>Main References:</i> <ul> <li>[1] Pfeifer, Rolf and M. Lungarella, and F. Iida, "Self-organization, embodiment, and biologically inspired robotics," <i>Science</i>, vol. 318, no. 5853, pp. 1088-1093, 2007.</li> <li>[2] Reas and C. McWilliams. 2010. <i>Form + Code in Design, Art, and Architecture</i>. New York, NY: Princeton Architectural Pres</li> <li>[3] Daniela, Sirbu and I. Dumitrache. 2017. "A Conceptual Framework for Artificial Creativity in Visual Arts." IEEE IJCCC International Journal of Computers, Communications, and Control 12(3):381-392, ISSN 1841-9836, June 2017, DOI: http://dx.doi.org/10.15837/ijccc.2017.3.2759.</li> </ul> </li> </ul>