

**Journals: Authored** (\* - Juried)

- DiPaola S, Riebe C, Enns J, "Rembrandt's Textural Agency: A Shared Perspective in Visual Art and Science", Leonardo, in press.\*
- Arya A, DiPaola S, Parush A, "Perceptually Valid Facial Expressions for Character-based Applications", International Journal of Computer Games Technology, Vol 2009, Article ID 462315, 13 pages, 2009. \*
- DiPaola S, Gabora L, "Incorporating Characteristics of Human Creativity into an Evolutionary Art Algorithm", Genetic Programming and Evolvable Machines Journal, Vol 10, No 2, pp 97-110, 2009. \*
- DiPaola S, "Exploring a Parameterized Portrait Painting Space", International Journal of Art and Technology, Vol 2, No 1-2, pp 82-93, 2009. \*
- DiPaola S, Turner J, "Authoring the Intimate Self: Identity, Expression and Role-playing within a Pioneering Virtual Community", Loading... - Journal of the Canadian Games Studies Association, Vol 1, No 3, 2008.
- DiPaola S, "Computationally Rendered Painterly Portrait Spaces", Artciencia: Art & Science Journal, Vol 4, No 9, pp 1-8, October-January, 2008. \*
- DiPaola S, Arya A, "Exploring Face Expression with a Face-Centric Animation and Communication based Authoring Environment", Animation Journal (Sage), under 2<sup>nd</sup> revision. \*
- DiPaola S, "Darwin's Enduring Legacy" – Images of my research in "computer model of evolution acting on the painting, ..." selected by the Nature editors to accompany this essay (invited, not peer reviewed). The Journal Nature, Vol 451, pp 632-633 Feb, 2008.
- DiPaola S, Akai C, "Blending Science Knowledge and AI Gaming Techniques for Experiential Learning", Loading... - Journal of the Canadian Games Studies Association, Vol.1, No 1, 2007. \*
- Arya A, DiPaola S, "Face Modeling and Animation Language for MPEG-4 XMT Framework", IEEE Transactions on Multimedia, Vol 9, No 6, pp 1137-1146, 2007. \*
- DiPaola S, Akai C, Kraus B, "Experiencing Belugas: Developing an Action Selection-Based Aquarium Interactive", Adaptive Behavior - Animals, Animats, Software Agents, Robots, Adaptive Systems (Special Issue on Action Selection) 15, 1 (Mar. 2007), 99-113. 2007. \*
- Arya A, Enns J, Jefferies L, DiPaola S, "Facial Actions as Visual Cues for Personality", Computer Animation and Virtual Worlds (CAVW) Journal, Vol 17, No 3-4, pp 371-382, 2006. \*
- DiPaola S, "Artificial Intelligence Systems in New Media Art and Design", Artciencia: Art & Science Journal, Vol 2, No 4, pp 1-8, August-October, 2006. \*
- Arya A, DiPaola S, "Multi-Space Behavioral Model for Face-based Affective Social Agents", Journal of Image and Video Processing, Special Issue on Facial Image Processing. 1 (Jan. 2007), 4-4., 12 pages 2007. \*
- DiPaola S, "Evolving Portrait Painter Programs using Genetic Programming to Explore Computer Creativity", iDMAa Journal (Journal of the International Digital Media and Arts Association), 2006. \*
- DiPaola S, "Extending the Range of Facial Types", IEEE Journal of Visualization and Computer Animation, Vol 2, No 4, pp 129-131. 1991.\*

**Books & Book Chapters: Authored**

- DiPaola S, "Designing Socially Expressive Character Agents to Facilitate Learning " (Book Chapter), Simulation and Advanced Gaming Environments for Learning, Editors Kaufman D, Sauvé L, 2009.
- DiPaola S, Computer Facial Animation, by Parke F, Waters K, 2<sup>nd</sup> Edition, AK Peters, Book Excerpt - pgs. 133-136, 225-251, 368-369. 2008.
- DiPaola S, "Designing Socially Expressive Character Agents to Facilitate Learning " (Book Chapter), Simulation and Advanced Gaming Environments for Learning, Editors Kaufman D, Sauvé L, under review, 2008.
- DiPaola S, "Gesture and Expression in 3D Virtual Communities and Personas" (Book Chapter) for Gesture and the Tacit Dimension, Editor: Gill, S MIT Press. (Forthcoming book)
- DiPaola S, Avatars, by Damer B, Peach Pit Press, Book Excerpt - pgs. 446-448, 193-234, cover/back art. 1998.
- DiPaola S, Computer Facial Animation, by Parke F, Waters K, AK Peters, Book Excerpt - pgs. 101-104, 214-219, cover artwork. 1996.

**Conference Papers: Authored** (\*: Juried)

- Riebe, C., DiPaola, S., & Enns, J.T. Following the masters: Viewer gaze is directed by relative detail in painted portraits. Abstracts of the Vision Sciences Society, 9th Annual Meeting, #144, May, 2009.\*
- Zammitto V, DiPaola S, Arya A, "A Methodology for Incorporating Personality Modeling in Believable Game Characters", Proceedings of International Conference on Games Research and Development (CyberGames), Beijing, China. 2008. \*
- DiPaola S, "Authoring the Global Self: Identity, Expression and Role-playing in Virtual Communities", Proceedings of CGSA (Canadian Game Studies Association), Vancouver, 2008. \*

## Conference Papers: Authored (continued) (\*: Juried)

- DiPaola S, "The Trace and the Gaze: Textural Agency in Rembrandt's Late Portraiture from a Vision Science Perspective", Proceedings of Electronic Imaging & Visual Arts, London. July. 2008. \*
- DiPaola S, Arya A, "A Framework for Socially Communicative Faces in Games and Interactive Applications", Proceedings of the 2007 Conference on Future Play (Toronto, Canada, November 14 - 17, 2007). Future Play '07. ACM, New York, NY, 129-136. \*
- DiPaola S, Gabora L, "Incorporating Characteristics of Human Creativity into an Evolutionary Art Algorithm", In Proceedings of the 2007 GECCO Conference Companion on Genetic and Evolutionary Computation (London,, July 07 - 11, 2007). GECCO '07. ACM, New York, NY, 2450-2456. \*
- DiPaola S, "A Knowledge Based Approach to Modeling Portrait Painting Methodology", Proceedings of Electronic Imaging & Visual Arts, London, 2007. \*
- DiPaola S, "Painterly Rendered Portraits from Photographs using a Knowledge-Based Approach", In Proc: SPIE Human Vision and Imaging, Int. Society for Optical Engineering, Keynote paper. 2007.
- DiPaola S, Akai C, "Blending Science Knowledge and AI Gaming Techniques for Experiential Learning", Proceedings of CGSA (Canadian Game Studies Association) 2006, Toronto, 2006.
- DiPaola S, Arya A, "Emotional Remapping of Music to Facial Animation", In Proceedings of the 2006 ACM SIGGRAPH Symposium on Videogames (Boston, Massachusetts, July 30 - 31, 2006). Sandbox '06. ACM, New York, NY, 143-149. \*
- DiPaola S, Arya A, "Socially Communicative Characters for Interactive Applications," International Conference in Central Europe on Computer Graphics, Visualization and Computer Vision, 2006 \*
- DiPaola S, Akai C, "Designing Adaptive Multimedia Interactives to Support Shared Learning Experiences", In ACM SIGGRAPH 2006 Educators Program (Boston, Massachusetts, July 30 - August 03, 2006). SIGGRAPH '06. ACM, New York, NY, 14. 2006.\*
- Arya A, DiPaola S, Jefferies L, and Enns J, "Socially communicative characters for interactive applications," 14th International Conference in Central Europe on Computer Graphics, Visualization and Computer Vision (WSCG-2006), University of West Bohemia, Plzen, Czech Republic, January 30 - February 3, 2006. \*
- DiPaola S, Akai C, "Shifting Boundaries: the Ontological Implications of Simulating Marine Mammals", New Forms Festival Conference, Museum of Anthropology, Vancouver, 2005. \*
- DiPaola S, Arya A, Chan J, "Simulating Face to Face Collaboration for Interactive Learning Systems", Proceeding from E-Learn 2005, Vancouver, 2005. \*
- DiPaola S, "Evolving Creative Portrait Painter Programs Using Darwinian Techniques with an Automatic Fitness Function", Proceedings of Electronic Imaging & Visual Arts, London. July. 2005. \*
- Tolmie J, DiPaola S, Charles A, "Towards an Interactive Visualization of Game Design Patterns", Digital Games Research Association, Vancouver, Canada, 2005. \*
- DiPaola S, Arya A, "Socially Expressive Communication Agents: A Face-centric Approach", Proceedings of Electronic Imaging & Visual Arts, EVA-2005, Florence, Italy, March 17-18, 2005. \*
- DiPaola S, "Face, Portrait, Mask - the Virtuality of the Synthetic Face ", Old and New Forms Conference, Vancouver Art Gallery, Vancouver, 2004. \*
- DiPaola S, Dorash D, Brandt G, "Ratava's Line: Emergent Learning and Design Using Collaborative Virtual Worlds", In ACM SIGGRAPH 2004 Educators Program (Los Angeles, California, August 08 - 12, 2004). T. Longson, Ed. SIGGRAPH '04. ACM, New York, NY, 25. 2004. \*
- DiPaola S, Arya A, "Affective Communication Remapping in MusicFace System", Proceedings of Electronic Imaging & Visual Arts, EVA-2004, London, England, July 26-31, 2004. \*
- Arya A, DiPaola S, "Face as a Multimedia Object", 5th International Workshop on Image Analysis for Multimedia Interactive Services, Lisbon, Portugal, April 21-23, 2004. \*
- DiPaola S, Collins C, "A Social Metaphor-based 3D Virtual Environment", In ACM SIGGRAPH 2003 Educators Program (San Diego, California, July 27 - 31, 2003). SIGGRAPH '03. ACM, New York, NY, 1-2. 2003.\*
- DiPaola S, "Investigating Face Space", In ACM SIGGRAPH 2002 Conference Abstracts and Applications (San Antonio, Texas, July 21 - 26, 2002). SIGGRAPH '02. ACM, New York, NY, 207-207. 2002.\*
- DiPaola S, "FaceSpace: A Facial Spatial-Domain Toolkit", In Proceedings of IEEE Information Visualization, London, 105-109, 2002. \*
- DiPaola S, Collins C, "A 3D Virtual Environment for Social Telepresence", Western Computer Graphics Symposium, '02, 2002.
- DiPaola S, Collins C, "A 3D Natural Emulation Design to Virtual Communities", In ACM SIGGRAPH 99 Conference Abstracts and Applications (Los Angeles, California, United States, August 08 - 13, 1999). SIGGRAPH '99. ACM, New York, NY, 208. 1999.\*
- DiPaola S, "3D Parameterized Facial Modeling & Animation", ACM Siggraph Facial Animation Tutorial, 1989.\*

## Grants and Awards

- 2007 Heritage Canada - New Media Network Fund – Primary Investigator (SFU) - \$1.4M (\$370K SFU), 2 Years – Creativity Assisted Technology for Gaming and Interactive Systems. With Seneca College, Univ. of Western Ontario.
- 2007 Michael Smith MSHFHR Team Start-up Grant - Co-Investigator - \$225K, 3 Years - Variability in Face Processing of Children with Autism, with J. Enns (UBC Psy) & G. Iarocci (SFU Autism Lab), 2nd Round.
- 2006 NSERC Discovery Grant - Primary Investigator - \$65K, 5 Years - Intelligent Character Systems
- 2006 Canada Parks / Heritage Grant - Research Collaborator - Intelligent Exhibit Design - Pacific Rim National Park
- 2005 Industry Grant - Primary Investigator - Vancouver Aquarium - ~\$10K - Interactive Marine Mammal Learning Systems.
- 2004 Industry Grant - Primary Investigator - Radical Entertainment - ~\$50K - Next generation intelligent facial system research.
- 2003 SSHRC Grant - Research Associate - \$4M, 3Yrs (partial) - Simulation and Advanced Gaming Environments (SAGE)
- 2003 WestGrid Grant - Research Associate - \$5M, 4Yrs (partial) - Collaborative Visualization Group under Jonathan Borwein.
- 2001 ASI Provincial Research Grant - Primary Investigator - \$120K, 4 years - 3D Facial Expression in Sciences and Arts.
- 2000 Industry Grant - Primary Investigator – Electronic Arts - \$75K – Genetic Programming Techniques for Facial Creation
- 1999 Smithsonian Institution's Permanent Research Collection of Information Technology (for Onlive Traveler).
- 1995 British Interactive Media Awards Gold Medal Winner, (for 3D Atlas).
- 1994 Emma Awards, Cannes Best International Product • Communication Arts Design Awards Best Educational Product.