

Aline Normoyle, PhD

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Education

University of Pennsylvania

Ph.D. Computer Science 2009-2015
M. Eng. Computer Graphics and Game Technology 2009

McGill University

B.Sc. Honors Computer Science, Dean's Honor List 1999

Employment History

Academic Employment and Internships

Bryn Mawr College, Assistant Professor 2020-Current
Swarthmore College, Visiting Assistant Professor 2017-2020
Clemson University, Engineering Consultant 2017-2018
Recurse Center, Sabbatical Residency 2016
Robotics Institute, Carnegie Mellon University, Research Assistant 2011-2012
Disney Research, Imagineer Summer 2011

Professional Employment

Savvy Sine LLC, Sole Proprietor 2018-Current
Venturi Labs LLC, Director of Software Development 2017-2020
Moon Collider Ltd, AI Programmer and Researcher 2015-2016
SIG Center for Computer Graphics, University of Pennsylvania, Associate Director 2012-2013
Acko Collaboratory for Advancement of the Systems Approach (ACASA),
University of Pennsylvania, Sr. Programmer/Analyst 2006-2008
MAK Technologies, Sr. Software Engineer 1999-2006

Publications

Peer-Reviewed Papers and Posters

Ngaw, Britney, Grishma Jena, Joao Sedoc, and Aline Normoyle. "Towards Authoring Open-Ended Behaviors for Narrative Puzzle Games with Large Language Model Support". In: *Proceedings of the 19th International Conference on the Foundations of Digital Games*. 2024, pp. 1-4. doi: 10.1145/3649921.3656975.

Normoyle, Aline, Sophie Jorg, and Jennifer Hill. "The Curation Tree: A Lightweight Behavior Tree Framework for Implementing Puzzle and Narrative Games". In: *Proceedings of the 19th International Conference on the Foundations of Digital Games*. 2024, pp. 1-4. doi: 10.1145/3649921.3659840.

Normoyle, Aline, Joao Sedoc, and Tf[-5Tf()Tj/F4 1 Tf[-85.7(19th)]TJ/F1 1 Tedoc,

Normoyle, Aline, Neha Thumu, and Yi Fei

- Normoyle, Aline and Sophie Jørg. "Trade-offs between responsiveness and naturalness for player characters". In: *Proceedings of the 7th International Conference on Motion in Games*. 2014, pp. 61{70. doi: 10.1145/2668064.2668087.
- Normoyle, Aline, Maxim Likhachev, and Alla Safonova. "Stochastic activity authoring with direct user control". In: *Proceedings of the 18th Meeting of the ACM SIGGRAPH Symposium on Interactive 3D Graphics and Games*. 2014, pp. 31{38. doi: 10.1145/2556700.2556714.
- Normoyle, Aline, Jeremy B Badler, Teresa Fan, Norman I Badler, Vinicius J Cassol, and Soraia R Musse. "Evaluating perceived trust from procedurally animated gaze". In: *Proceedings of Motion on Games*. 2013, pp. 141{148. doi: 10.1145/2522628.2522630.
- Normoyle, Aline, Fannie Liu, Mubbasir Kapadia, Norman I Badler, and Sophie Jørg. "The effect of posture and dynamics on the perception of emotion". In: *Proceedings of the ACM symposium on applied perception (best student presentation)*. 2013, pp. 91{98. doi: 10.1145/2492494.2492500.
- Jørg, Sophie, Aline Normoyle, and Alla Safonova. "How responsiveness affects players' perception in digital games". In: *Proceedings of the ACM symposium on applied perception*. 2012, pp. 33{38. doi: 10.1145/2338676.2338683.
- Normoyle, Aline, John Drake, Maxim Likhachev, and Alla Safonova. "Game-based data capture for player metrics". In: *Proceedings of the AAAI Conference on Artificial Intelligence and Interactive Digital Entertainment*. Vol. 8. 1. 2012, pp. 44{50. doi: 10.1609/ai.i.de.v8i1.12508.
- Zhao, Liming, Aline Normoyle, Sanjeev Khanna, and Alla Safonova. "Automatic construction of a minimum size motion graph". In: *Proceedings of the 2009 ACM SIGGRAPH/Eurographics symposium on Computer animation*. 2009, pp. 27{35. doi: 10.1145/1599470.1599474.
- Knight, Kevin M, Deepthi Chandrasekaran, Aline Normoyle, Ransom Weaver, and Barry G Silverman. "Transgression and atonement". In: *International Workshop on Coordination, Organizations, Institutions, and Norms in Agent Systems (COIN'08)*. Springer Berlin Heidelberg Berlin, Heidelberg. 2008, pp. 250{265. doi: 10.5555/3000392.3000414.
- Silverman, Barry G, Aline Normoyle, Praveen Kannan, Richard Pater, Deepthi Chandrasekaran, and Gnana Bharathy. "An embeddable testbed for insurgent and terrorist agent theories: InsurgiSim". In: *Intelligent Decision Technologies 2.4* (2008), pp. 193{203. doi: 10.5555/1515884.1515885.
- Summers, V, Aline Normoyle, and Robert Flo. "Increasing situational awareness by combining realistic and non-realistic rendering techniques". In: *Proceedings of the 10th International Command and Control Research and Technology Symposium*. Accession Number: ADA463760. 2005.

Technical reports, working papers, posters, and talks

- Senghas, Ann, Aline Normoyle, Naomi Caselli, Corrine Occhino, and Matthew W. G. Dye. "Measuring changes in Nicaraguan signing using skeletal modeling with analog 2D video sources". In: *15th International Conference on Theoretical Issues in Sign Language Research (TISLR 15)*. Poster. 2025.
- The effects of inaccurate body language on 3D digital self-expression*. Invited Talk, Bamberg University, Bamberg, Germany. 2023.
- How avatar grasping affects perceived body ownership and performance in virtual reality*. Invited Talk, CIMAT, Guanajuato,

from 2D Video Sources". In: *14th International Conference on Theoretical Issues in Sign Language Research (TISLR 14)*. Talk. 2022.

Normoyle A., Zhang E. and Badler N. I. \Open-body- t: open-source resources for estimating biomechanically-motivated metrics from video". In: *ACM SIGGRAPH Motion, Interaction, and Games (MIG '22)*. Poster. 2022.

Normoyle, Aline and Shane T Jensen. \Bayesian learning of play styles in multiplayer video games". In: *arXiv preprint arXiv:2112.07437* (2021).

Normoyle A., Rothstein S. J. and Badler N. I. \Quantifying sign-language movement kinematics from video". In: *ACM SIGGRAPH Symposium on Interactive 3D Graphics and Games (i3D '21)*. Poster. 2021.

Lane, Stephen H. and Aline Normoyle. *Civic Portal: Virtual Monuments*. Fast Forward Philly. 2018.

Procedural Art Pop-up. Recurse Center, Hosted by the School of Machines, Making, and Make Believe, Berlin. 2017.

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Grants and Awards Received

1. Bryn Mawr
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Academic Service

Institutional Service

Chemistry Hiring Committee	2024
Committee on Libraries, Information and Computing (CLIC)	2024-2027
Faculty Contact for the University of Pennsylvania Accelerated Master's Program (4+1)	2023-Current
Institutional Review Board, Bryn Mawr College	2021-Current
Playing House: A seminar featuring Mark Z. Danielewski Collaborated with primary organizer, Jose Vergara	Spring 2024
Panel discussion: Literature, game design, and storytelling Canaday Library Exhibit Setup (One week)	
PEW Grant: Retrospective of Annie Dorsen's Algorithmic Theater Collaborated with primary organizer, Linda Caruso Haviland	Spring 2023
Host for LaJune McMillian Visit	

Academic Software

1. AGL: A Graphics Library. *Small, easy to use C++ library for 3D drawing, based on OpenGL.*
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Ziyao Wang, Fall 2021, *Artistic Hair Modeling*

Yuxiao Wang, Fall 2020, *Literature Review: Embodied Conversational Agents*

Independent Study

Yue Chen, Paprika Chen, Joon Luther, Kylie McCombs, Gavin Sears, Neha Thumu, Fall 2024, *HyperReal Theater*

Neha Thumu, Spring 2023, *Control Strategies for Mobile Augmented Reality*

Neha Thumu, Fall 2022, *Motion and navigation planning for digital characters*

Samuel J. Rothstein, Spring 2020, *Procedural generation of body language*

Michael Piazza, Spring 2017, *Topics in Procedural Animation*

Research students

Zachary Tenn Yuk, Summer 2024, University of Florida REU, *EduToon: Generating comic book summaries for academic papers.*

Neha Thumu, Summer 2022, Bryn Mawr Summer Science Researcher (SSR), *Understanding how character control and level design affect the player experience in video games*

Edward Zhang, Summer 2022, University of Pennsylvania REU, *Collaborative Research: Multimethod Investigation of Articulatory and Perceptual Constraints on Natural Language Evolution.*

Gulesh Shukla, Spring 2022, Bryn Mawr RA, *Analysis of motion from video*

Lola Rodrigues, Fall 2021, Bryn Mawr RA, *Peg Board Task Game*

Samuel J. Rothstein, Summer 2020, University of Pennsylvania REU, *Collaborative Research: Multimethod Investigation of Articulatory and Perceptual Constraints on Natural Language Evolution.*

Felicity Yick and Samantha Lee, Summer 2020, University of Pennsylvania Summer Research, *SPACES Project: Recreating the ancient city of Pachacamac.*

Katherine Lima, Summer 2019, Swarthmore Summer Researcher, *Role Player Game (RPG) Development for Artificial Intelligence Testbed*

Yi Fei Cheng, Summer 2019, Swarthmore Summer Researcher, *The Q*Bird Level Designer: User-assisted procedural Level Design in Augmented Reality*

Mirabai Smoot and Nana Anikuabe, Summer 2019, Swarthmore Summer Researcher, *Adaptive Bayesian learning of Playstyles*

E e Li, Summer 2019, University of Pennsylvania REU, *Collaborative Research: Multimethod Investigation of Articulatory and Perceptual Constraints on Natural Language Evolution.*

Kristin Chow, Summer 2019, University of Pennsylvania Summer Researcher, *SPACES Project: Recreating the ancient city of Pachacamac.*

Xuan Huang, Spring 2017, Bryn Mawr College, *Procedural Generation of Cities*

Mentorship and Support

Chandini Ragobar, Summer 2023, Haverford College, Chesick Summer Experience Funding

Swarthmore CPSC 000SR, Spring 2019, Student instructor: Aaron Kang, *Introduction to Unity*