Mark Gillespie

Curriculum Vitae

▬▬▬ Education

2018–Present	**PhD Computer Science**, *Carnegie Mellon University*, Pittsburgh Advisor: Keenan Crane. Topics: geometry processing, computer graphics
2014–2018	**B.S. Computer Science, Mathematics**, *California Institute of Technology*, Pasadena Double major. GPA: 4.1

▬▬▬ Publications

[5] Nicole Feng, **Mark Gillespie**, and Keenan Crane. "Winding Numbers on Discrete Surfaces". In: *ACM Trans. Graph.* 42.4 (July 2023), pp. 1–17. DOI: 10.1145/3592401.

[4] Hsueh-Ti Derek Liu, **Mark Gillespie**, Benjamin Chislett, Nicholas Sharp, Alec Jacobson, and Keenan Crane. "Surface Simplification Using Intrinsic Error Metrics". In: *ACM Trans. Graph.* 42.4 (July 2023), pp. 1–17. DOI: 10.1145/3592403.

[3] **Mark Gillespie**, Nicholas Sharp, and Keenan Crane. "Integer Coordinates for Intrinsic Geometry Processing". In: *ACM Trans. Graph.* 40.6 (Dec. 2021), pp. 1–13. DOI: 10.1145/3478513.3480522.

[2] Nicholas Sharp, **Mark Gillespie**, and Keenan Crane. "Geometry Processing with Intrinsic Triangulations". In: SIGGRAPH '21 (July 2021). DOI: 10.1145/3450508.3464592.

[1] **Mark Gillespie**, Boris Springborn, and Keenan Crane. "Discrete Conformal Equivalence of Polyhedral Surfaces". In: *ACM Trans. Graph.* 40.4 (July 2021), pp. 1–20. DOI: 10.1145/3450626.3459763.

▬▬▬ Experience

2018–Present	**Graduate Researcher**, *Carnegie Mellon University*, Advisor: Keenan Crane
July 2023	**Visiting Researcher**, *Technische Universität Berlin, Berlin*, Host: Boris Springborn
Summer 2022	**Visiting Graduate**, *University of California, San Diego*, Host: Albert Chern
Summer 2017	**Arthur R. Adams Undergraduate Researcher**, *Caltech*, Mentor: Peter Schröder
Summer 2016	**Arthur R. Adams Undergraduate Researcher**, *Caltech*, Mentor: Mathieu Desbrun
2016–2017	**Undergraduate Researcher**, *Caltech*, Mentor: Alan Barr
Summer 2015	**Software Engineering Intern**, *Google*

▬▬▬ Talks

Sept. 2023	**Intrinsic Triangulations in Geometry Processing**, *IST Austria*
Aug. 2023	**Intrinsic Triangulations in Geometry Processing**, *Geometry Workshop in Obergurgl*
Jul. 2023	**Intrinsic Triangulations in Geometry Processing**, *TU Berlin SFB TRR 109 Colloquium*
Apr. 2022	**Discrete Conformal Equivalence of Polyhedral Surfaces**, *UCSD Pixel Cafe*
Nov. 2021	**Integer Coordinates for Intrinsic Geometry Processing**, *ACM SIGGRAPH Asia 2021*

Aug. 2021	**Discrete Conformal Equivalence of Polyhedral Surfaces**, *ACM SIGGRAPH 2021*
Aug. 2021	**Geometry Processing with Intrinsic Triangulations**, *ACM SIGGRAPH 2021 Courses*
June 2021	**Geometry Processing with Intrinsic Triangulations**, *SIAM International Meshing Roundtable Courses (IMR 2021)*

Awards & Fellowships

2019-2022	NSF Graduate Research Fellowship	
2016-2017	Arthur R Adams SURF Fellow	
2017	SIGGRAPH ACM Turing Award Celebration Grant	
2016	William Lowell Putnam Mathematics Competition	*31 points (rank: 365/3214)*

Service

Departmental	Organizer, Graphics Reading Group (2022-2023); Organizer, Graphics Seminar (2020-2021); Panel Speaker (CSD Visit Day 2020, 2023, CSD Introductory Course 2022)
Reviewing	SIGGRAPH (2019, 2022, 2023), SIGGRAPH Asia (2022, 2023), Computer-Aided Design (2023), Transactions on Visualization and Computer Graphics (2023), Computers & Graphics (2021)
Mentorship	Advising Master's student (2022-2023), CMU Summer Undergraduate Research Fellowship (2020)

Programming Languages

C/C++, Python, Java, Mathematica, Matlab, Haskell, Ocaml, LaTeX