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*.

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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