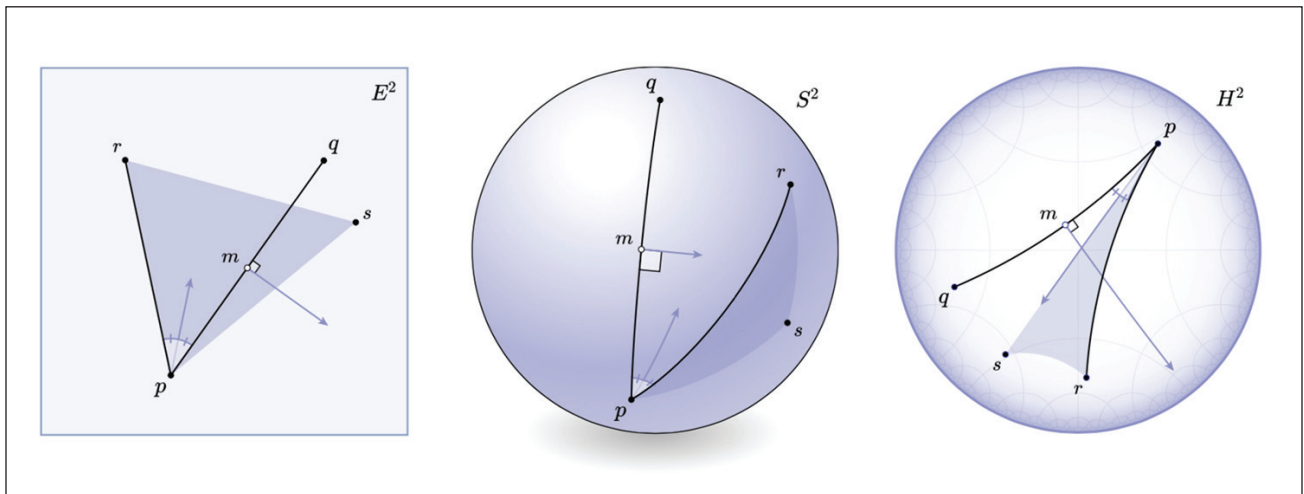


acm Transactions on Graphics

July 2020
Volume 39 Number 4



The Association for Computing Machinery, Inc.
2 Penn Plaza, Suite 701
New York, New York 10121-0701

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ACM ISSN 0730-0301
ACM Order Number 428030

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Articles in this journal issue are paginated by article number and page number within the article, rather than by consecutive page numbers from the start of the first issue of the journal's current volume. The table of contents, author index and reference format all use this article-based pagination system.

ACM is transitioning to an article-based, "online first" content publishing system and all ACM journals are undergoing a similar transition.

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Preface

Rooms... Elephants... What does one say in times like these?

How do we talk about a conference dedicated to the virtual, the imaginative, the abstract... while acknowledging a very real disruption more widespread than any we have seen during peacetime in a century? How do we address COVID-19 without being melodramatic, while not trivializing the fact that, for some, this has been much more than merely a disruption?

I believe that we talk about people. We talk about paper authors who pour their creative energies into new ways of bringing us wonder, connection, understanding, and joy — and new ways of being social despite distance. We talk about reviewers and committee members who, with no advance warning, build and conduct a radically different decision-making workflow while remaining true to the integrity and seriousness of the SIGGRAPH process. We talk about volunteers who create from scratch an online conference dedicated to exploring and celebrating computer graphics and interactive techniques.

And we talk about how these people, despite everything going on around them, crafted a lasting accomplishment: the collection of 124 papers (out of 443 original submissions) that you find in this volume. These, together with 39 articles published in ACM Transactions on Graphics over the past year, constitute the SIGGRAPH 2020 Technical Papers program, which is being delivered in a brand-new format this year.

These papers set the pace for what's next in visual computing. They were selected on the basis of the excellence of their ideas and their ability to stimulate future trends across a diverse range of areas. Some of them explore how to apply today's hottest techniques from Machine Learning in every imaginable context. Some of them make steady progress on core graphics topics of animation, imaging, modeling, and rendering, and the closely related areas of human-computer interaction, visualization, audio, and games. Some of the papers investigate emerging topics such as computational fabrication, human-centered robotics, and immersive technologies. And others reflect a "back to basics" revisiting of classic problems in 2D, including strokes, icons, sketches, and diagrams.

All of the papers adhere to the highest scientific standards and were chosen through a rigorous, double-blind peer review process. For the first time, the Technical Papers Committee meeting was held entirely virtually this year, but the committee and I stand behind the results: the selections were made with just as much care, attention, and integrity as ever. We are proud to uphold the rich history of the SIGGRAPH Technical Papers review process as a model not just in graphics and interactive techniques, but across computer science.

But let's get back to people. Building SIGGRAPH and the Technical Papers program requires unbelievably hard work and dedication from hundreds of people at the best of times, let alone under unusual and trying circumstances. Here are just a few of the people I'd like to thank:

- Paper authors, for their creativity and ingenuity, and for producing 443 diverse submissions that keep our field healthy and vibrant.
- The 10 members of the sorting team, the 60 program committee members, the 29 conflict-of-interest coordinators, and the hundreds of reviewers who wrote over 2,000 reviews and then distilled them into a set of high-quality decisions.
- Karol Myszkowski and Sylvain Paris, papers chairs of the next SIGGRAPH Asia and SIGGRAPH, for participating in and contributing to the process every step of the way.
- Stephen Spencer for managing the publications process with his usual saintly patience towards people who are late with material or trying to get away with something.
- Andrew Glassner and Tom Buehler for producing an inspiring papers trailer.
- Adam Finkelstein for so, so many things. From sage advice about every unusual thing that's happened, to his dedicated work on HePCat (our program committee meeting management app), to his heroic work creating pc-breakout, to managing the trailer selection and production, Adam has been a co-conspirator and friend, this past year and going back two decades.
- My colleagues and friends at Princeton, especially Tom Funkhouser for keeping me (somewhat) grounded and Olga Russakovsky for keeping me (somewhat) sane.
- Misha Kazhdan for being a great friend and collaborator, with sound ideas and advice.

Preface

- The dedicated staff at SmithBucklin. It's no exaggeration to say that the papers program would not happen without Leona Caffey, and "keeping the process running" doesn't begin to describe her tireless work. Similarly, it's no exaggeration to say that the conference itself would not happen without Cindy Stark. Additional thanks to Tim Hendrickson, Emily Drake, and Michele Hellrung for managing publicity and communications, and to Jenna Feldman for her help during the PC meeting.
- Mark Montague and the staff at Linklings for seamlessly running a submission and review system while patiently dealing with a stream of questions and special cases.
- Kristy Pron, the SIGGRAPH 2020 Conference Chair, for having a steady hand on the wheel as everything was upended around us.
- The Papers Advisory Group (PAG), for serving as the collective memory of everything that's right about our community, and the collective conscience that keeps it that way.
- Family and loved ones. Mine, yours, everyone's. Go give them a hug, when you can.

On behalf of everyone listed above, I have the pleasure of presenting to you the SIGGRAPH 2020 Technical Papers. Whether you have been part of the SIGGRAPH community for decades, or are a new student just starting out, I hope that you will find them thought-provoking and inspiring. And I hope that Sylvain Paris, Technical Papers Chair of SIGGRAPH 2021, will have the pleasure of acknowledging your contribution, as an author or volunteer, next year.

— Szymon Rusinkiewicz, SIGGRAPH 2020 Technical Papers Chair
At home in Princeton, NJ, USA