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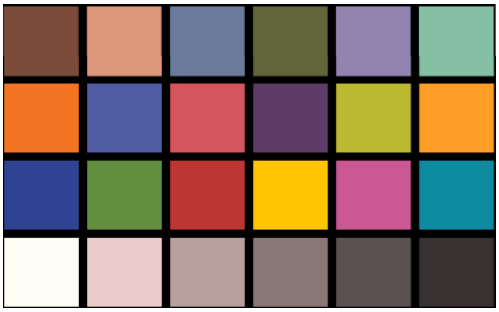
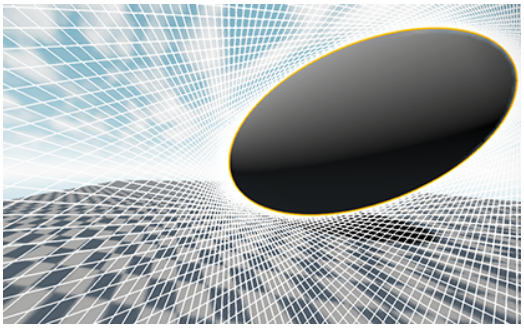


Simple Analytic Approximations to the CIE XYZ Color Matching Functions
Wyman, Sloan, and Shirley

Robust BVH Ray Traversal
Ize

Harnessing the GPU for Real-Time Haptic Tissue Simulation
Etheredge and Kunst

The Visibility Buffer: A Cache-Friendly Approach to Deferred Shading
Burns and Hunt

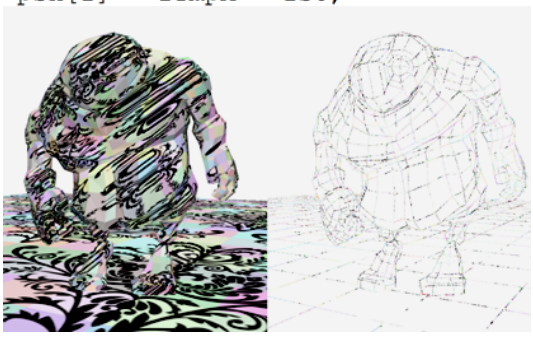


2D Polyhedral Bounds of a Clipped, Perspective-Projected 3D Sphere
Mara and McGuire

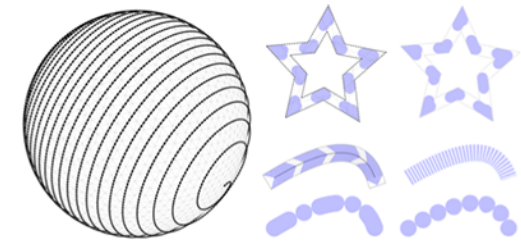
```
pSH[0] = 0.2820947917738781f;
pSH[2] = 0.4886025119029199f * f
pSH[6] = 0.9461746957575601f * f
fC0 = fX;
fS0 = fY;

fTmpA = -0.48860251190292f;
pSH[3] = fTmpA * fC0;
pSH[1] = fTmpA * fS0;
```

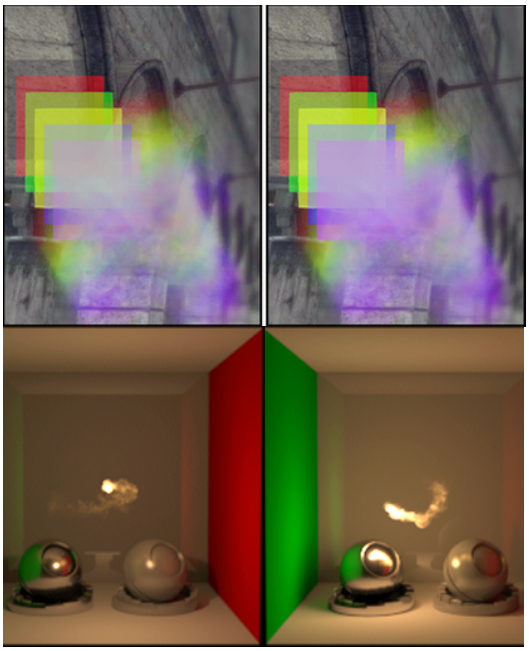
Efficient Spherical Harmonic Evaluation
Sloan



Avoiding Texture Seams by Discarding Filter Taps
Toth



Shader-Based Antialiased, Dashed, Stroked Polylines
Rougier



Weighted Blended Order-Independent Transparency
McGuire and Bavoil

Practical Illumination from Flames
Villemin and Hery

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Masthead

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JCGT accepts single-blind submissions of formal scientific and engineering articles on computer graphics. Papers may be:

- **Clever hacks and tricks**: previously unpublished conventional wisdom or new implementation tweaks
- **Novel techniques and algorithms**: "battle-tested" new methods with well-analyzed characteristics, especially ones used in real production
- **Implementation and case studies**: production notes, implementation details, discussion of practical workflow around a technique, or new and extensive analysis of previous work
- **Surveys**: summary and discussion of a family of published techniques, similar to a textbook chapter

These may apply to any area of computer graphics, including rendering, user interfaces, modeling, animation, hardware design, geometry, topology, games, film, CAD, DCC, and visualization.

Articles should be "gems" that emphasize simplicity, clarity, and utility. Their goal is to help implementers decide if the technique is appropriate for their application and then assist in that implementation.

The limitations, border cases, and artifacts of a technique should be explained in detail. For example, it is fine for a technique to work only well 5% of the time, so long as the reader understands the conditions that trigger that case and what happens in the other cases. "Battle-tested" means that you have thoroughly investigated these limits. There are many ways to accomplish this, including experiments on many and diverse scenes or platforms, careful analytic analysis of the entire input domain followed by experiments, or widespread distribution of the technique among practitioners. Production use is of course the gold standard for battle-testing: if you made a product, then it is definitely useful and something that the community wants to know about.

There is no minimum or maximum article length, however we recommend short articles with supplemental code, data, and video. Only directly relevant related work should be cited. As a coarse rule of thumb, a typical paper is four pages, with four citations, six color images, some inline code examples, and a supplemental code file. Papers that include all implementation details and supplemental code are much more likely to be accepted.

Papers must be original work for which the author owns the copyright on the text and has permission to distribute the images, code, and data.

Papers may be typeset in any tool (since authors need never submit their document source) but must exactly match our **formatting template**. We

recommend the use of PDFLaTeX and BibTeX, which the template directly supports. We encourage taking advantage of the electronic distribution format with high-resolution color images and text that explicitly refers to the supplemental files that will be distributed alongside it.

To submit your manuscript:

1. E-mail a zipfile containing a PDF of your paper and any supplemental files to **Morgan McGuire (editor-in-chief@jcgt.org)**. Your name, affiliation, and e-mail address should appear on the paper.

2. You will receive confirmation e-mail after the EIC has verified that the submission is in order and solicited anonymous peer review.

3. The editorial board will make a determination after the reviews are received. The article will either be **recommended** for publication or **rejected**. Rejected articles may be resubmitted later. Recommended articles are assigned a corresponding editor who will work with the authors to revise the manuscript. Those articles are guaranteed to be published if the author makes the required changes.

4. Recommended articles may progress through several rounds of external review or editing before acceptance.

5. On acceptance, the board appends an article to the current issue and assigns it page numbers. They then post the article on http://jcgt.org. The current issue number increments at the end of each quarter and the volume number increments at the end of each calendar year.

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