

## **Circle Packing Beauties**

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They say that "beauty" is in the eye of the beholder. Well, there are few topics where us beholders get more opportunities for beauty than in circle packing, as thorough a mixture of theory, computation, experimentation, and visualization as one could hope for. Circle packings, introduced by Bill Thurston in 1985, are configurations of circles satisfying prescribed patterns of tangency. Circles not only have instant curb appeal, but even when constrained by prescribed combinatorics, they enthusiastically pack together. Crucially, the geometry their packings manifest is conformal in nature -- this is a "quantum conformality" which is classical in the limit. I will illustrate some of the many vistas in mathematics and applications available via my software package CirclePack, an open-ended experimental laboratory in 2D conformal geometry, a serendipity fountain, and, of course, a source of beautiful images. I hope this survey talk sparks links to other topics of the workshop, but ultimately of course, beauty is its own reward.