Making a Splash

The interplay of water, light, and music in some modern fountains is magical to behold, and mathematics is part of that magic. Geometry is used in the overall design, mathematical modeling simulates the fluid-particle interactions, and powerful algorithms drive the software that coordinates thousands of valves and lights through the numerous sequences in a typical show.

The ability to make water act so precisely results from the use of *laminar flow streams* where all particles move in parallel and at the same speed. A complex mathematical analysis of fluid dynamics makes it possible for water to perform feats such as climbing stairs or behaving like individual marbles. The result is both wondrous and efficient: A four-foot column of water wouldn't fill a normal drinking glass.

For More Information: "Inventive Artist Sculpts in Water," *USA Today*, Bill Meyers, March 14, 1999.

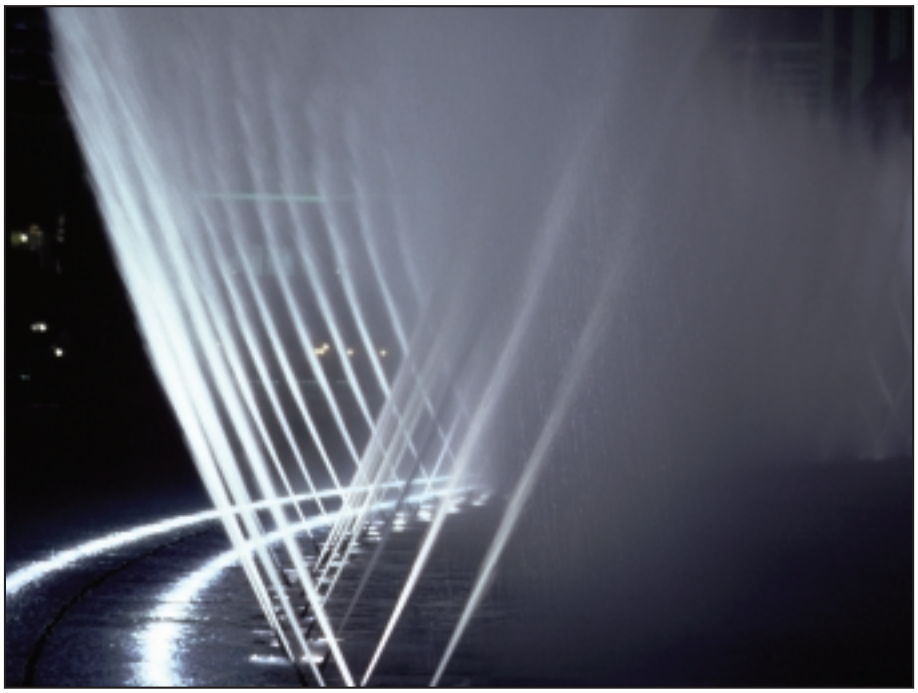

Photo by Ira Kahn for WET Design.

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