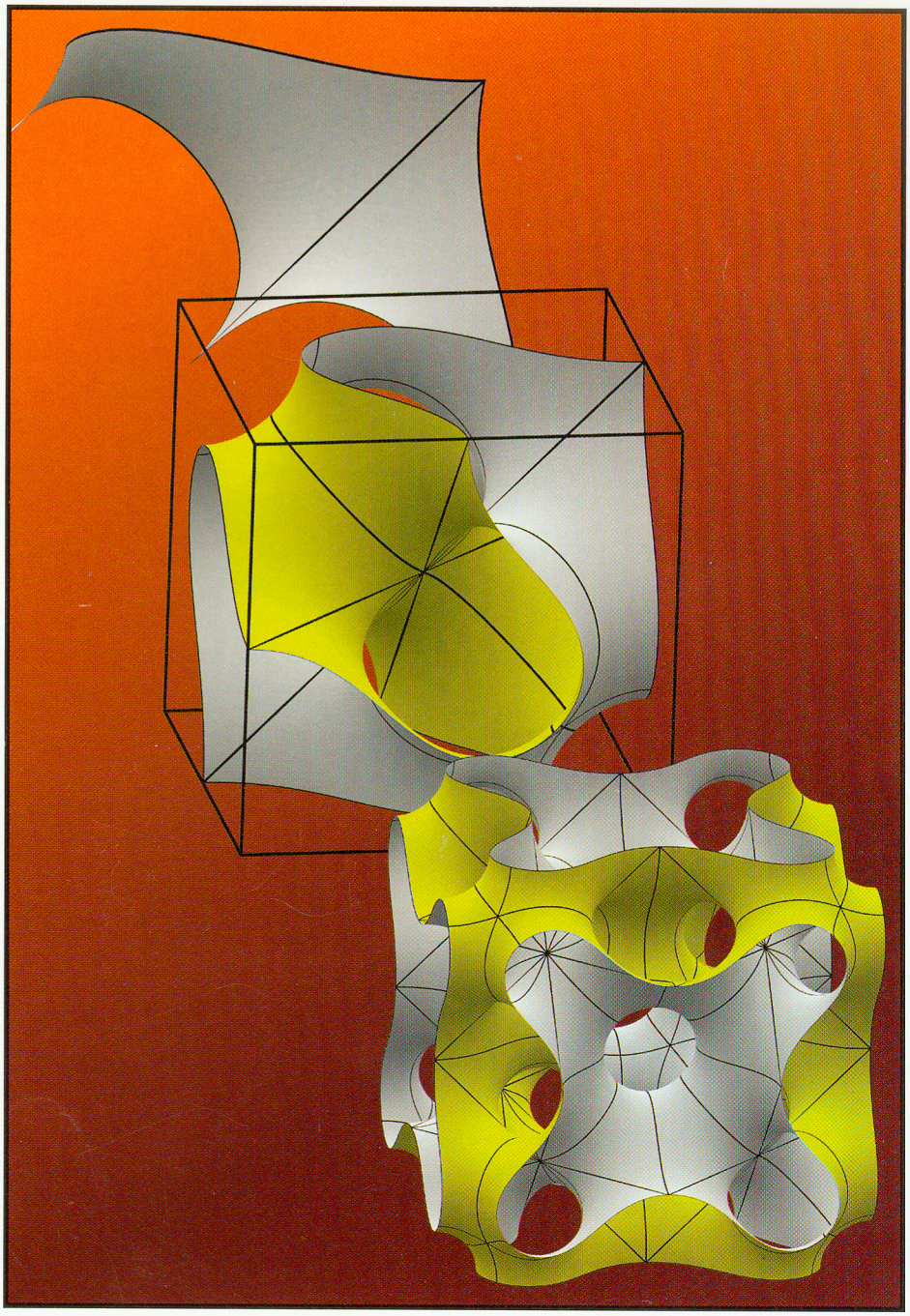
ISSN 0002-9920

Notices

of the American Mathematical Society

December 2000

Volume 47, Number 11



Triply Periodic Minimal Surface (see page 1359)

research journals are straightforward extensions of the paper journals, using computers merely to share and distribute articles of an essentially traditional nature. The exception is the MAA journal *Communications in Visual Mathematics*. It is sad to see that it is apparently languishing.

We would like to mention that the International Society for the Interdisciplinary Study of Symmetry (ISIS Symmetry) and the Mathematical Institute (Belgrade, Yugoslavia) are publishing the electronic quarterly *VisMath* ("Visual Mathematics"), which one can find at the address `http://members.tripod.com/vismath/` or `http://www.mi.sanu.ac.yu/vismath/`.

From January 1999, when the journal started, 43 papers and 18 math-art exhibitions have been published. The next issue will be published at the end of September 2000. We hope that *Notices* readers will view *VisMath* as a nontraditional electronic journal that is not languishing.

—Slavik Jablan
Belgrade, Yugoslavia (Serbia)
—Dénes Nagy
Melbourne, Australia

(Received August 15, 2000)

Preserve and Disseminate *Notices* Articles

I would like to make a suggestion pertaining to articles that have appeared (and those that might appear) in the *Notices*.

Although I am technically retired and my work has moved more heavily into statistics, applied statistics at that, I frequently take time to read articles that appear in the *Notices*. In catching up on my reading, I found the article about Hilbert's problems and the one about Oberwolfach (August 2000) especially interesting. I often tear out such articles before disposing of the issues. Unfortunately, this leads to a rather messy collection of stapled packets.

My suggestion concerns these articles that are a facet of the history of mathematics that is unlikely to reappear in a history book. Because of the nature of the *Notices* being strongly a journal of record (meeting notices, abstracts, job advertisements, book advertisements, announcements pertaining to NSF and other government agencies, etc.), it is unlikely that one would keep them for the same reason that one would keep one of the "regular" journals. It seems a shame for these historical and broad perspective contributions to disappear so easily. Might there not be a way to collect them periodically into a book or some other more permanent form? Perhaps also they might be collected into an archive on the the AMS Web site. While there are many graduate students who are members of the AMS and will receive the *Notices*, it is more likely that they will become members after they complete their degrees. These articles represent a historical perspective and research perspective that need to be brought to the attention of graduate students more forcefully and made available to them over a longer period of time.

I urge that the AMS consider some scheme to preserve and more widely disseminate these.

—Donald E. Myers
University of Arizona, Tucson

(Received August 24, 2000)

The *Notices* invites letters from readers about mathematics and mathematics-related topics. Electronic submissions are best. Acceptable letters are usually limited to something under one printed page, and shorter letters are preferred. Accepted letters undergo light copyediting before publication. See the masthead for electronic and postal addresses for submissions.

About the Cover

A *minimal surface* is a surface that is locally area-minimizing; that is, a small piece has the smallest possible area for a surface spanning the boundary of that piece. Soap films are minimal surfaces. Minimal surfaces necessarily have zero mean curvature; i.e., the sum of the principal curvatures at each point is zero. Particularly fascinating are minimal surfaces that have a crystalline structure, in the sense of repeating themselves in three dimensions—in other words, of being *triply periodic*. Many triply periodic minimal surfaces are known.

The cover shows one such surface, Schoen's Manta Surface of Genus 25. The cell that is repeated periodically is a cube. Within that cube the fundamental region for constructing the surface is a tetrahedron that occupies 1/96 of the cube. The first image shows two fundamental regions whose appearance is the source of the name "manta". The second image shows twelve fundamental regions in a cube. The third image is the full cubical unit cell.

These images were made with a program called Surface Evolver, which can be downloaded for free at `http://www.susqu.edu/brakke/`. The surfaces are generally made by defining and evolving the fundamental region of the surface, which is usually very simple due to the high symmetry, and then displaying many copies of it, suitably transformed.

More surfaces of this kind, together with their source files, may be obtained by starting from the above Web address.

—Kenneth A. Brakke
Susquehanna University