Frontiers in Computer Science


A boost for U.S. education standards; a blow for Arizona telescope project; etc.

The Foundations of Research • Can Big Science Claim Credit for MRI?
Icy inferno: Researchers Plan Blaze in Arctic • How to Scrub an Arctic Oil Spill
Science Education: Where’s the Beef?
New Award Debuts at NIH
Academy Panel Split on Greenhouse Adaptation

Listening to the Music of the Spheres
Venus Caught in a Geologic Act?
A Painless Route to Parallel Computing?
Hydrox, the Cleanser That Thrives on Dirt • Pinning Down a Will-o’-the-Wisp
Chemistry With a Thousand Faces: New Ways to Play With Clay • Turning Polymer Spaghetti Into Lasagna • Coopting Nature’s Own Nano-electronics • Bacterial Indigo Gives the Blues to Industrial Chemists
Briefings: Stanford Surgeon to Stay—After All • Russian AIDS Puzzle • Early Quake Warning • New Chief for Women’s Health • Slamming Natural Gas Into Petrol • Disney Discovers • Children Who Want to Bear Children • Let the Sun Shine In

New Approaches to Robotics: R. A. Brooks
Instruction-Level Parallel Processing: J. A. Fisher and B. R. Rau
Natural Language Processing: A. K. Joshi
Computer Vision: Y. Aloimonos and A. Rosenfeld

Conversion of images into digital form is one aspect of computer vision. Once digitized, an image can be processed, manipulated, and interpreted. The matrix of numbers is the numerical representation of the light and dark regions within the square border around the woman’s eye. The articles in this issue survey developments in computer vision, robotics, parallel processing, and natural language processing. See editorial, page 1189, and articles, pages 1227 to 1254. [Cover by Julie Cherry; digital image of Sarah Bernhardt courtesy of Azriel Rosenfeld]