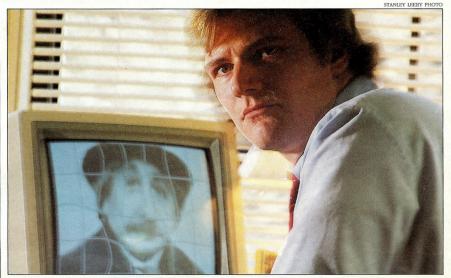# Pacesetters

Renaissance and Rock

By John Dunn

Writing books," says Christopher D. Watkins, 27-year-old president of Atlanta-based Algorithm Inc., "is like eating potato chips. You can't have just one."

So far Watkins, a 1989 electrical engineering graduate, has co-authored five books. A sixth—*Virtual Reality Excursions*—is due out in February. His two most recent books—*Modern Image Processing: Warping, Morphing and Classical Techniques* (co-authored with Stephen R. Marenka, EE '89) and *Photorealism and Ray Tracing in C* come with programming disks for IBM-compatible personal computers. But like potato chips, Watkins' books are not the staple diet of his career; they're snacks.

"I write books that *I* would buy," says Watkins. "I wanted that book; I know someone else wants that book. I'm leaving a paper trail—an information trail that should benefit both academic sorts and hobbyists.

"Besides," Watkins grins, "books make incredible calling cards."

Watkins, who has boyish looks and a deep bass voice, is a businessman. He started his business under a different name as a 10th-grade student at sub-

When not solving technical problems or writing books, Chris Watkins plays music with his band.

urban Atlanta Sequoyah High School. After school he wrote 3-D graphics software programs and games for a consulting firm that sold them to a software company.

As a student at Tech, he renamed his company Algorithm, in reference to the step-by-step procedure of solving mathematical problems, and began working directly with companies to solve specific problems.

"We're sort of a think tank," says Watkins, whose company has four full-time employees and the motto, "Solutions through Technology." He emphasizes solutions.

"I look at a problem and I think it through before I execute a solution,"

Watkins says. "I do not hack on programming or business ventures. Usually the solution is fairly elegant. But arriving at the solution—you've got to really work and think through it. It is precise. If someone is going to pay you money to do it, it has to be a technological solution and not an academic exercise."

Watkins is involved in power engineering research and development, creating photo-realistic, ray-traced imagery and anti-aliasing methods, and developing warping and morphing technologies for entertainment. He is also developing desktop virtual reality simulation systems for the medical field, and is working on a system that

would allow doctors at a remote location to consult with medical experts via telecommunications.

Watkins has developed a software package for orthodontists—an analytical tool that uses warping techniques.

The software will save the orthodontist time in making calculations for treatment of a patient's teeth and, Watkins says, "The data is more valid than the data using compasses and protractors because it is actually scaled to a [universal] measure in all x-rays."

The software is designed for image mapping—overlapping a patient's x-ray with a photograph that is automatically reoriented and sized.

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The software's warping technique allows an orthodontist to show a person how dental treatment or reconstructive surgery could enhance the patient's physical features.

Watkins was six when electronics caught his inter-est. By the age of 10, he had put kits aside and began designing his own electronic projects. It was about that time, as a fifth-grade student, that he became fascinated with the early computers.

"I look at the ability to program a computer, and the ability to solve engineering problems—being an engineer—as tools," Watkins says. "I don't look at them as anything that makes up what I consider the sum total of my personality. They are just tools to do things. Money is a tool. I don't think that money should be a prime motivator; it should be a fringe benefit. I love solving problems; I have a great passion for it."

Watkins also has a passion for music, and he devotes about two hours of his 20-hour day to playing the guitar and writing music. His musical tastes vary from Baroque—Bach and Paganini—to the heavy-metal neo-classical style, and he includes among his favorite guitarists Andres Segovia, Chet Atkins, Steve Morse and Yngwie J. Malmsteen. Before 1994 is over he expects to pro-duce a CD with his band, "Fair Warning," featuring both his guitar playing and his compositions, which range in style from classi-cal to modern.

Watkins' other interests —ham radio (KA4DQE), sailing, astronomy, holo-graphy, karate, soccer and chess—are juggled into his schedule as time permits.

Among the things Watkins would really like to do is earn his doctorate. "It would give me a great deal of personal satisfac-tion," Watkins says. "But," he laments, "when would I find the time?" ■