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ETHICS IN MATHEMATICS: A REQUEST FOR INFORMATION

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As part of a recent reform of general education, Longwood College initiated a requirement that all students take an ethics course at the junior or senior level. Each academic department was encouraged to develop an ethics course designed specifically for its majors. It fell my lot to design such a course for the Mathematics and Computer Science Department. This note is an appeal for help.

My research indicates that a good deal of work has been done on ethics in computer science. The Association for Computing Machinery (ACM) and the Institute of Electrical and Electronics Engineers (IEEE), the two major professional organizations, have professional codes of ethics. There is an active professional group, Computer Professionals for Social Responsibility, whose mission is to develop ways to deal more effectively with ethical problems. Numerous computer science departments offer ethics courses, and I have contacted some of the teachers. Course syllabae, materials, and texts exist.

Very little appears to have been done on ethics in mathematics. I can find no systematic treatment of the subject, not even a thorough bibliography. Many pure mathematicians appear to feel that ethical concerns are not pertinent to their discipline. I have found little evidence that applied mathematicians have thoughtfully considered the issues.

Important ethical considerations do occur in mathematics, however. Here are two of which I am aware. First, should algorithms be patentable? In 1988 Bell Labs was granted a patent on Karmarkar's improved linear programming method. What are the ethical implications of patenting such results of mathematical research? Second, should mathematicians submit to censorship? What if the censorship were voluntary and in the interests of national defense? The National Security Agency posed this dilemma when it requested researchers in coding theory to voluntarily submit prepublication versions of papers to NSA for review.

I am concerned with educating undergraduate math and computer science majors. I want to design and implement a course that presents them with ethical issues they will face as professionals. Do you know of researchers working in the field of mathematical ethics? Are there schools that offer such courses? Can you suggest additional case studies of ethics in mathematics?

I will appreciate any help you can give me. Please direct your responses to:

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