

On Digital Math Libraries

We should not compromise rigorous mathematical standards as we move from paper to computer. In fact, this is an opportunity to drastically improve standards. Many computer bugs are simply slips in logical and mathematical reasoning made by programmers and software designers.

- Mathematics influences the standards of scientific discourse, in the statistical sciences, in computer science, and throughout the sciences. If we promote sloppy platforms, the entire world will be worse off.
- Bugs in computer systems can lead to disaster: Intel Pentium FDIV bug, Ariane V explosion, . . .
- Bugs and design weaknesses in cryptographic software can be exploited by adversaries: Heartbleed, Logjam, Freak bug, . . .