High-speed engineering
of high-speed software

D. J. Bernstein
Traditional software engineering:
Design programming environment to minimize programmer time.
Environment is now constant. Write tons of software.
Software is now constant. Try to improve the compiler to minimize CPU time.
Oops, software doesn’t work!
Engineering correct software:

Design programming environment to encourage verification, discourage bugs.

Subject to that constraint, design programming environment to minimize programmer time.

Environment is now constant. Write tons of software.

Software is now constant. Try to improve the compiler to minimize CPU time.

Oops, software is too slow!
Engineering high-speed software:

Design programming environment to encourage verification, discourage bugs.

Subject to that constraint, design programming environment to minimize CPU time.

Subject to that constraint, design programming environment to minimize programmer time.

Environment is now constant. Write software.