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MuPAD
MuPAD is a general purpose computer algebra system whose design started in the late 80's at the University of Paderborn, Germany. Meanwhile the development of the system has reached a stage, where MuPAD has to be ranked as one of the top products in the area of general purpose symbolic software. We shall discuss what makes MuPAD different from its main competitors: it features a small and fast kernel (like Maple), yet offering domains of computation (like Axiom) and concepts for object oriented programming. MuPAD is a very open system: if features so-called "Dynamic Modules" which allow to link one's own compiled binary code to the kernel at run time. This opens a simple way to establish very close links to other software *at kernel level*. Applications of this software technology include the linking between MuPAD and other special purpose symbolic software (such as Singular) or to numerical software packages making fast hardware numerics available inside a MuPAD session .
We shall give a demonstration of the new release 1.4. In particular, we point out the new worksheet (notebook) interface, we give examples of MuPAD's domain concept and we shall discuss some aspects of the numerical libraries in the new release.