

1056-BD-1252 **Klaus Sutner*** (sutner@cs.cmu.edu), 5000 Forbes Avenue, Pittsburgh, PA 15213.
Computational Discrete Mathematics: Computation versus Bourbaki.

CDM takes a fresh look at some of the standard concepts of discrete mathematics (relations, functions, logic, graphs, algebra, automata), with strong and consistent emphasis on computation and algorithms rather than the traditional axiomatic approach that has become popular in the second half of the 20th century. Another key concern is knowledge transfer: we try to build bridges between traditional mathematical concepts and the new computational universe powered by ubiquitous and cheap computation. Note that this process is fully bidirectional: computation helps to understand mathematics and mathematics informs computation.

The course entirely computer-held and is web accessible. A small part is also available in OLI format and we hope to achieve full conversion in 2010. (Received September 21, 2009)