When MATLAB Gives Wrong Answers

Abstract:
MATLAB is generally considered to be the leading software package for scientific computing. In this talk we consider a number of computational examples where MATLAB gives or appears to give wrong answers. These examples are useful to help better understand the inner workings, evolution, limits and tradeoffs of a software package such as MATLAB. The author has collected and developed these examples over the years and has used them in his classes. The examples help students gain greater insight into the fundamentals of matrix computations and also into the basics of finite precision arithmetic and related concepts such as round off error, machine precision, numerical stability, and conditioning.

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