FEATURE ARTICLES

6 Reliability of CMOS Integrated Circuits
   G.L. Schnable, L.J. Gallace, and H.L. Pujol
   CMOS ICs are being produced using a variety of processes, and considerable data is now available on their reliability and failure mechanisms.

19 High-Speed Monolithic Multipliers for Real-Time Digital Signal Processing
   Shlomo Waser
   Real-time digital signal processing requires very fast multiplication, which is now becoming possible using mathematical techniques to take advantage of single-chip multipliers.

31 A Case Study of Simulation as a Computer System Design Tool
   Gary J. Nutt
   Simulation can be a powerful design tool, allowing system architects and programmers to optimize both hardware and software before a final design is chosen.

38 Analytic Modeling of Computer Systems
   Kishor S. Trivedi
   Deterministic and probabilistic models capable of representing more and more system parameters are being developed. One of their primary attractions is low cost.

MICROSYSTEMS

60 Standards for the Personal Computing Network
   James Isaak
   De facto standards will not be adequate to allow widespread communication among personal computing systems. Here is a look at the issues and the possibilities.

SPECIAL FEATURES

66 Conference Report: Hierarchical Design Stressed at Design Automation Conference
   John P. Gray

70 Conference Report: 1978 Summer Computer Simulation Conference
   Ware Myers

75 Open Channel: Microprocessors and the Emulation Approach to Machine Intelligence
   A.J. Cote, Jr.

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