Finally, a couple of words on an erroneous first version of this table. It was instructive precisely because it was erroneous. The four class numbers for the $D = 62501$ above came out $H = 3, 3, 4, 9$. Since all H for the other four cases of $m = 4$ were divisible by 3, it did appear A) that that $H = 4$, and presumably other H, were wrong; and B) that the Gras-Callahan Theorem referred to in [2] was also valid in the real case. Georges Gras subsequently proved this B) but Frank Gerth III had already done that independently. While the thirteen H for Table 2 are not known to me, they must all be divisible by 9. The errors in A) were confirmed and corrected.

There were also errors in some units. The Artin function at argument 1 equals

$$\Phi(1) = 4RH/\sqrt{D} \tag{2}$$

where R is the regulator. Since $\Phi(1)$ is easily estimated by a determination of how all small primes split, (2) is a very powerful check on the consistency of R and H, and one can detect an error in one if the other is known. So the erroneous units were also detected and corrected. If ϵ_1 and ϵ_2 are a fundamental pair of units, then so are $\epsilon_3 = \epsilon_1^2\epsilon_2$ and $\epsilon_4 = \epsilon_1\epsilon_2$. But ϵ_3 and ϵ_2 are not a fundamental pair. Is ϵ_3 a "fundamental unit"? The moral is that it is erroneous and dangerous to speak of "a pair of fundamental units." One must say "a fundamental pair of units."

D. S.

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The authors have presented a good introduction to analog and hybrid computation techniques. The book is written so that students without an electronic background can follow the material. In the first chapter, for example, the operation of analog and logic components is adequately presented without detailed electronic circuitry. A more detailed description of the analog components is covered in the Appendix for those who are interested. Another favorable point is the variety of good, basic problems given at the end of several chapters.

The method of implementing a differential equation on the analog computer and the method of amplitude scaling presented in Chapter 2 are not the most convenient techniques for large scale systems. The change of variables suggested is neither necessary nor desirable when simulating a large system. However, the techniques set forth are adequate for an introductory course where simple systems are considered. The method of time scaling is well presented.

Perhaps the two chapters on function generation are too lengthy when compared with the time allotted to other more important topics. However, the material is well presented and is indeed a strong part of the text. Similarly, the chapter on analog memory is a welcome variation from most analog computer texts. More advanced analog techniques such as integration with respect to a variable other than time are also presented.

Before presenting hybrid computation, the authors discuss digital simulation of second order differential equations. A basic knowledge of computer programming is assumed. The comparison of digital and analog methods is made.

The introductory chapter on hybrid computing is excellent. The information relative to the software necessary to utilize the interface components is well presented. In the following chapters, sequential and parallel hybrid computation techniques are demonstrated by examples. Split boundary value problems and parameter optimization are given as examples of sequential operation. Examples of parallel operation include axes rotation and time delays. In the final chapter the application of simulation to the study and design of feedback control systems is introduced.

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