convergence properties of the assignment algorithm, effects of identical parallelism, cost of algorithm, and effects of size of cluster sets. Also, several studies of the sensitivity of the model to variations in branching probabilities, cycle factors, and unit operation times are described and associated data presented. Finally, a comparison of results with simulations using SIMSCRIPT, including execution times, is presented.

All in all, the results in these three papers contribute significantly to our knowledge of parallel processor modeling and system operation. A great deal more work is needed, particularly on features omitted from this model, such as storage allocation, characterization of memory organization, and dynamic assignments. Indeed, this reviewer believes that work of this type on computer system models is in its infancy. Much activity has recently been directed towards time-shared systems (see Scherr, for example), but Karp and Miller have also proposed a different computation graph model of parallel computations oriented to other fundamental problems.

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B. ANALOG AND HYBRID COMPUTATION


This paper was written in reaction to a body of literature on continuous parameter tracking that has by and large ignored the use of continuous regression techniques introduced by A. I. Rubin in an earlier paper. The case for the use of continuous regression in the parameter tracking problem is presented in a concise and professional manner. A distinction is made between, the "real world time" employed in the formulation of the model, and in the development of the regression performance measure, and, the "data processing time" employed in the steepest descent circuits that are performing the minimization of the performance measure with respect to the parameters. This distinction is an important contribution, both analytically and conceptually, to the parameter identification literature; the authors' belief that other workers in the field might profit from this distinction is well founded.

However, as might be expected, some critical comments are in order. The authors favorably compare the simplicity of their method to the output error method presented by Meissinger and Bekey. This is not an entirely objective comparison inasmuch as the output error method is addressed to a more difficult version of the parameter identification problem. The performance measure of the output error method is of the form

\[ \int_0^T (z - y)^T A (z - y) \, dt \]
