Book Review:

High Performance Cluster Computing: Architectures and Systems, Vol. 1
Rajkumar Buyya, Ed.
Prentice Hall PTR, Upper Saddle River, NJ, 1999
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High Performance Cluster Computing: Programming and Applications, Vol. 2
Rajkumar Buyya, Ed.
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The two volumes attempt to render a self-contained idea of the state of the art of cluster computing by the year 1999. In the whole, thirty-six articles are presented in Vol. 1 and twenty-nine articles in Vol.2. In each volume, the articles are grouped according to the topics dealt with.

Vol. 1 is, in some way, more academic since it deals with architecture aspects and presents specific examples of clusters with details about the most important concepts solved and those which remain unsolved. Some of the articles present highly complex problems which are left without solution. This turns the articles of Vol. 1 into an excellent starting point for the study in this computer science's area.
The strongest points of Vol. 1 might be:
• An excellent description of cluster-based computing systems.
• Several proposals of classification as well as an explicit orientation to the academic sphere regarding to, for example, terminology.
The weakest points of Vol. 1 (that in no way leave the excellent editing work without merit) might be:
• It implicitly follows the classical idea that large computing problems are almost exclusively oriented to supercomputers with really high cost.
• Most (if not all) of the articles referred to the potential computers heterogeneity making up a cluster consider it as a problem to be solved, and there are nearly no proposals for a solution with this respect.

Vol. 2 -as its name suggests- is oriented to the programming and application of computer clusters. It is evident that it cannot be a thorough description, due to the large diversity of possibilities mainly in terms of processing applications over computer clusters. However, the description within the scope of programming and developing tools is fairly explained. On the other hand, one of the languages that has lately reached high repercussion (at least, in terms of publications) is presented for the programming in distributed memory environments: JAVA. This Vol. dedicates fourteen articles (out of the twenty-nine) to the description of algorithms and specific applications. On the one hand, this implies a relatively deep level of detail about the topics dealt with, but it also implies its consequent level of specificity, all of which might not be interesting for all kinds of readers. On the other hand, it is not possible to encompass all the potential topics in this area and, thus, it is likely that not all the articles will be useful for an area of application in general. This volume emphasizes the lack of explicit proposals for the solution of heterogeneous clusters problems. All of this brings about a clear orientation of Vol. 2 to the research sphere.

To sum up, Vol.1 might be the most advisable in general and, even more, within the academic sphere. Vol. 2 is rather oriented to research lines, above all in terms of algorithms and specific applications included in it.

In general, it is worth to mention the great effort carried out to avoid (whenever possible) ambiguity and inconsistency in the concepts and approaches disparity that may arise in an editing work like the one of these two volumes.

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