

Display of rivalry

Neville Boden

Liquid Crystals. Editors G.R. Luckhurst and E.T. Samulski. *Taylor & Francis.* 12/yr. UK £272; US \$490.

LIQUID crystals were discovered 100 years ago, but until the 1970s they remained little more than an academic curiosity. Today they are established as important materials and will become even more so in future. Clearly, there is a need for a specialist journal which focuses solely on this emerging discipline. The arrival of *Liquid Crystals* will, therefore, be welcomed by those working in the area.

The journal contains original research papers, preliminary communications and invited review articles concerned with all aspects of liquid crystal science and technology. This includes experimental and theoretical studies of liquid crystals, their synthesis and applications. The papers published to date are of the highest quality, as are the printing, illustrations (colour plates, too) and format; the style, in fact, is identical to that of *Molecular Physics* which is from the same stable. Papers may be published in English, French or German, but it would be wise for the editors to encourage the use of English whenever possible. The distinguished editorial board will be an encouragement to intending contributors, as will the aim to publish material rapidly: papers should appear approximately six months after their receipt and preliminary communications after four months. Good going!

Liquid Crystals will be in competition with *Molecular Crystals and Liquid Crystals* published by Gordon & Breach. At present there are many factors in favour of the newcomer. Printing-style and format are superior, and in my view it gives better value for money. The more established journal also publishes research papers on molecular crystals and low-dimensional solids, and these will no doubt be of interest to other users of the library. But all of those involved in liquid crystal research will welcome a new journal devoted to their own subject, and also the 50 free reprints of their published work.

The success of the journal will, however, depend upon whether it can establish an identity quite distinct from its competitor, whether it can attract the most original research papers currently being published in the primary journals of physics, chemistry and biology, and whether the publishers can maintain its comparatively reasonable cost. □

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Going along with the system

S.R. Wilbur

Computer Systems: Science and Engineering. General editor T.S. Dillon. *Butterworth.* 4/yr. UK £93; elsewhere \$101.

WITH the advent of low-cost processing elements, the nature of computer systems has changed radically in recent years. To improve processing performance or reliability, complex multiprocessor systems structures have been developed which are rapidly becoming the norm not only for industrial applications, but also for general-purpose and personal computing. Analysis and modelling of the hardware, the software structures and the architectures of such innovative systems are vitally needed.

The journal under review is targeted to meet this need. Its broad aim is to "publish high quality papers on theoretical developments in Computer Systems science and their applications in Computer Systems engineering". More specifically it expects to be an international journal covering at least: fault-tolerant computer systems, performance modelling, real-time computing, distributed computing, large software systems, specification of computer systems, system aspects of VLSI, computer networks and special-purpose system applications.

Judged by its first few issues, the dominant theme is performance analysis or modelling, with lesser coverage of fault-tolerant computer systems, distributed computing, real-time computing, testability, systems realization and computer

networks. The quality of papers is good, and the standard seems to have been maintained over the first 18 months. Yet to date most papers have been long (5–15 typeset pages) and the journal lacks the liveliness associated with short papers or a correspondence column. Although there is no evidence of the refereeing cycle time, the conference and book reviews published were somewhat belated; in such a fast-moving subject, delays of 9–15 months for conference reviews are unacceptable. The quality of production is high, with all the papers being typeset and the art work re-labelled. There is a stated intention of publishing tutorials and survey articles, but none were included in the issues I received.

In aims, *Computer Systems: Science and Engineering* is more quantitatively biased than the *ACM Transactions on Computer Systems*, and overlaps somewhat with *IEEE Transactions on Software Engineering*. The overlap with the IEEE journal is noticeable in the first few issues, but there do appear to be enough good papers for both journals at present. Nonetheless, it is a pity that *Computer Systems: Science and Engineering* has not strengthened its coverage of system realization and system aspects of VLSI design, which were parts of its declared scope and which are not covered by the IEEE journal.

Altogether this is a good-quality publication addressing the broad area of computer systems, with an emphasis upon performance modelling and analysis. But the conference reports should be published more quickly, and the inclusion of short papers and correspondence would help to give the journal a less sluggish air. □

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Across the fields

C.A. Brebbia

Transport in Porous Media. Editor Jacob Bear. *Reidel* 6/yr. Dfl. 375 (institutional); Dfl. 156, \$67 (individual).

THE stated objective of *Transport in Porous Media* is to provide "high quality refereed papers which describe research results that contribute to the understanding of and the ability to model transport phenomena for practical applications".

Although these phenomena occur in a multitude of disciplines such as civil, agricultural and chemical engineering, reservoir modelling, bioengineering and many others, there has been little communication between researchers in the different areas. This journal thus meets an important need by presenting a unified approach to all transport problems and

pointing out common features of the problems that arise in various fields.

The composition of the editorial board and the editor's own background contribute to give a mathematical emphasis to the journal, stressing innovations in both theory and applications. Papers published so far tend to relate to new developments in mathematical and numerical methods.

The whole region of transport problems in porous media is covered, including chemical as well as physical aspects. The variables under consideration are mass, momentum and energy in single- and multi-phase media. The emphasis, however, seems to be on geotechnical applications, and there has been a series of outstanding contributions on this subject by well-known researchers. The quality of presentation is excellent, making the journal pleasant to read.

In addition to standard papers the journal accepts letters to the editor and short communications, and regularly