

PR people in AI

P.W. Hawkes

International Journal of Pattern Recognition and Artificial Intelligence. Editors-in-charge H. Bunke and P.S.-P. Wang. *World Scientific*. 4/yr. \$260 (institutional); \$138 (personal).

THERE is no shortage of journals catering for the image-processing and pattern-recognition (PR) community: an IEEE series, the long-established and beautifully produced *Computer Vision Graphics, and Image Processing*, *Pattern Recognition* and *Pattern Recognition Letters*, as

**INTERNATIONAL JOURNAL OF
PATTERN RECOGNITION AND
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well as specialized journals in medical imaging, remote sensing and the like. The list of artificial intelligence (AI) titles is not quite so long, but in neither field did one feel that important papers were piling up unpublished for want of journal space.

There was, however, no title that explicitly united AI and PR, and the object of this new journal is to attract papers in either field or, best of all, papers that involve both. Its success must be judged on this last category, for the remainder are already well catered for.

Rather to my surprise, there are a number of applied papers that do justify the existence of this new serial in the sense that they would otherwise have been published in journals so specialized that the PR and AI communities would probably have remained unaware of them. A good example is the contribution by H. Freeman and J. Ahn "On the Problem of Placing Names in a Geographic Map", a "seemingly simple task [that] is, in fact, remarkably subtle and complex". This is a fascinating article, with much to interest the student of image analysis, which no doubt would otherwise have appeared in *The American Cartographer* or *Annuaire International de Cartographie*.

Another vivid example is "Vision Applications in the Fishing and Fish Product Industries" by H. Arnarson, K. Bengoetxea and L.F. Pau, which tells us how machine vision can be used to detect worms (in cod...), bone residues and 'aesthetic' defects and also to sort different species despite the hostility of the ship-board environment. Here too, a glance at the list of references takes us outside the usual PR and AI territory with *Austral. Fish. J.*, *Prog. Fish. Cult.* and *J. Food Protection* among others.

A quotation will show why such a paper is of interest to those involved in pattern

recognition: "sorting by species as well as precise length estimation involves hypothesizing head and tail locations ... the filter kernels [for morphological filtering] ... must be size independent but species dependent. The shape anomalies [sic] between male and female fish as well as unretracted fins ... offer interesting challenges". Nevertheless, such papers as these are a small minority in the numbers I have seen, two of which contain conference proceedings (the Eighth International Conference on Pattern Recognition, held in Paris in 1986, and the International Workshop on Expert Systems, Novosibirsk, 1987).

Infant wisdom

G.F.J. Garlick

Physics World. Editor Philip Campbell. *Institute of Physics*. 12/yr. UK and elsewhere £53, North America \$104 (institutional); UK £23, North America \$44, elsewhere £25 (personal).

PHYSICS WORLD, an amalgamation and extension of two previous Institute of Physics' publications, began its monthly appearance in October of last year and is designed to present the interests of physics as a profession. The contents are wide ranging, running from the current problems of physics at all levels of education, through fiscal matters such as salaries and funding, to the interaction of British physicists with their counterparts in Europe and elsewhere, and reviews of the science itself.

To quote from the first editorial, the journal appeared "at a pivotal moment for physics, and in the long term, technological exploitation in the UK". Several issues subsequently describe the turmoil caused by new schools' curricula proposals from the Department of Education and Science, the critical-size test for university physics departments of the Edwards Committee and the faltering steps of the British government over continued support for CERN and high-energy physics. Again quoting the editor, "perhaps *Physics World* can be granted the privilege of the new born to express outrage at a hostile environment".

On a more positive note, most of the contents are devoted to review articles, both brief and extended. These generally deal with the frontiers of physics, or are sometimes historical, and all are written to avoid mathematical presentation (no mean feat given some of the topics). The standard is high and the publishers are to be commended in maintaining it over so many issues. Titles are sometimes snappy — "Quark Soup for Starters" or "Is Gravity as Simple as We Thought?" — but

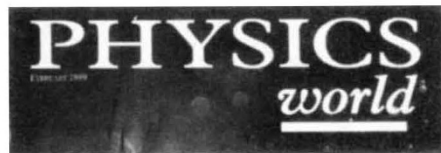
The journal is well produced on glossy paper, accepts colour artwork and appears willing to print long articles. Publication times range from eight months to over a year and there are no page charges. The personal subscription rate does not seem excessive, unlike the inflated institutional rate. If the *International Journal of Pattern Recognition and Artificial Intelligence* is not indispensable, nor is it otiose — and if you cannot afford it, it is covered in *Current Contents*. □

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one does get in-depth treatment. Topical issues such as 'cold fusion' have been discussed soberly, much attention being paid to the weighing of claims against the evidence. A different but very satisfying combination was seen in the April 1989 issue, which was largely devoted to "Physics in Scotland". The range and intensity of physics activity there was certainly a revelation to me.

Physics and the activities of physicists need to be explained to a public which often sees only the menace of nuclear waste and weapons, and fails to realize how every corner of life is filled with the products of physics. This new publication will be a valuable medium for communication of this kind. There have already been articles on "Communications Breakdown in Nuclear Energy" and "Nuclear Power is Green Power" which make a significant contribution in this respect.

The section of *Physics World* that always occupies the last page of text is entitled "Lateral Thoughts". This is the Parthian shot, where levity is introduced.



The topics form delightful light reading and apparently are most popular among physics student finalists, who have received free copies during the last academic session. I hope they didn't skip too many of the pages to get to them. Particularly to be commended are the book reviews, which show just what can be achieved in this medium.

Each issue contains plenty of news about the Institute of Physics and its members, and you can also look for jobs or supplies of apparatus in the classified section. Finally, cost — for members, *Physics World* is especially cheap, but it is not at all exorbitant for libraries and others. □

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