NEWS AND BOOK REVIEWS

COMPUTER SIMULATION TECHNIQUES IN HYDROLOGY by George Fleming, published by Elsevier, in their Environmental Science Series, 1975. 333pp. US$34.00.

The title is rather misleading. Early in the Introduction, simulation is defined as "the development and application of mathematical models to represent the time-variant interaction of physical processes." There is no doubt that the subject matter of the book is about this simulation, in hydrology, and with computers, but some areas of hydrological simulation are not covered at all. The book, in my opinion, is dealing mainly with one form of simulation model, the so-called "conceptual" model of catchment hydrology.

The core of the book is Chapter 5, in which 19 "different" models are listed, described, and (to a limited extent) compared. Considerable detail on each model is presented in the form of tables of parameters, processes represented, and specifications, and a generalized structural diagram. This compilation is valuable, since it facilitates comparison of some of the vast number of this type of model now available. A somewhat disjointed presentation, with text and tables often separated by a few pages, renders this comparison less than straightforward.

The remainder of the book is concerned first with preparing the way for the conceptual model approach, and second with providing examples of applications of models.

Chapter 3 discusses data management for simulation models – including hydrometeorological data, physical data describing the areas whose hydrological behaviour is to be simulated, and process data as defined by the models chosen. Chapter 4 investigates these processes in considerable detail. This material is the standard content of all hydrology texts, but in some areas it is presented in novel ways to demonstrate the particular relevance or otherwise to simulation. In several cases, process descriptions include details of process representation in various popular conceptual models. This is a very useful approach, since these are often gross simplifications and are normally omitted from rigorous, physically based, general hydrology texts.

The final chapter is on applications. Various examples are given

of data generation, hydrological design, and hydrological systems operation and management including "real-time" flow forecasting, reservoir control, and land-use change. A small but valuable section on deterministic models in teaching and research completes the book.

Overall the book will probably be useful as a background reference for occasional consultation rather than a regular course textbook. Its content is too narrow for the general hydrologist, and yet not sufficiently detailed for advanced studies in hydrological simulation.

D.L. MURRAY

GRADUATE COURSE IN HYDROLOGY
13 March to 16 June, 1978

The School of Civil Engineering of The University of New South Wales has conducted a graduate course in hydrology each year since 1960. The next Course will commence on 13 March 1978 and will last for three months on a full-time basis, concluding on 16 June. The 1978 Course will be similar to those of recent years and students can elect to specialize either in surface water hydrology or in groundwater hydrology.

These courses are suitable for engineers, surveyors, agricultural scientists, meteorologists, foresters, soil conservationists and hydro-geologists, and are particularly convenient for students who are unable to spend one or two years in Sydney to complete normal graduate courses in hydrology.

Admission requirements for the Course are a first degree in engineering or science or alternatively, similar qualifications together with suitable experience in the field of hydrology. The cost of the course is $A750. Brochures giving full details of the course may be obtained from the Head, School of Civil Engineering, The University of New South Wales, P.O. Box 1, Kensington, N.S.W. 2033.

INTERNATIONAL WATER RESOURCES ASSOCIATION

Professor T. G. Chapman (Department of Civil Engineering, RMC, Duntroon, 2600 Australia) has recently accepted an invitation to become Regional Representative for Oceania on the Membership Committee of the International Water Resources Association. Although the Association had 1137 members in June 1976, it appears that there are now no New Zealand members. In case the reason for this apparent lack of interest is in fact a lack of information about the objectives and activities of IWRA, the following information is given.

The International Water Resources Association was established in response to an apparent need for a world organisation to promote interdisciplinary communication and co-operation among industries, business and social groups, and professionals of diverse backgrounds in *all aspects* of water resources (air, land, and ocean) of international nature and interest. It is generally recognised that gaps exist between activities of international organisations from the global water resources viewpoint since most of them are concerned only with specific aspects of water science and technology. IWRA's mission is then to bridge these

gaps by providing an international forum, in co-operation with other international organisations, where *all aspects* of water resources can be explored, problems be discussed and solutions be advanced.

The principal objectives of the International Water Resources Association are:

- To advance water resources planning, development, management, administration, science, technology, research and education on an international level.
- To establish an international forum for planners, administrators, managers, industrialists, scientists, engineers, educators and others who are concerned with water resources.
- To encourage collaboration and support of international programmes in the field of water resources, including cooperation with the United Nations and its agencies and other international and national organisations in activities of common interest.

The IWRA sponsors Congresses and Symposia, of which the most recent ones were an International Exposition and Seminar on Water Resources Instrumentation held in Chicago in 1974, and the Second World Congress on "Water for Human Needs", held in New Delhi in 1975.

IWRA publishes a quarterly newsletter with the title "Water International", which includes reports on important water projects around the world, and news on past and forthcoming international meetings and conferences in the field of water resources. Another publication "Selected Works in Water Resources" contains published and unpublished articles of special importance selected from international sources in the field of water resources. Finally, IWRA publishes the proceedings and papers presented at its Congresses and Symposia.

IWRA is planning to establish an international water resources referral centre to provide information on availability of products and professional services, employment opportunities in various countries, educational programmes and research facilities, important water projects, and membership of affiliated associations and societies.

The Secretariat of IWRA is located in the United States, and the President is Dr Ven Te Chow. Personal membership of IWRA involves an annual subscription of $US15, which includes the cost of "Water International". Anyone interested in obtaining application forms or further information about IWRA can write in the first instance to Professor Chapman.