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## Editorial

# *Advanced Communications in Health Care*

This IMIA Yearbook on Medical Informatics bears the title: *Advanced Communications in Health Care* and it is the third Yearbook in as many years. Almost 10,000 copies of this Yearbook are distributed worldwide, primarily among members of Societies that belong to IMIA. The Figure in soft grey tones on the cover of the Yearbook represents the networking environment now operational in many health care institutions, which is also connected to the outside world to exchange data and knowledge. As in the earlier Yearbooks, a selection was made from the best articles in the field of health and medical informatics in the preceding year, with the help of about 40 referees whose contributions are acknowledged at the end of this Editorial. In addition, Review Articles have been included on important recent developments, and overviews are given of a selection of Education and Training programs in medical/health informatics.

From reactions that we have received thus far on earlier Yearbooks, it appears that many readers consider the Yearbook a rich source of information that allows them to follow the developments in the field; more and more, the Yearbook is also used for teaching at the postgraduate level and for special courses. The latter is only possible because the price for members belonging to IMIA Societies could be kept low.

### IMIA

The so-called 'IMIA pages' in the Yearbook contain a host of information on IMIA, its Member Societies and its Working Groups. The Section on Working Groups was prepared by Dr Jean-Raoul Scherrer from Geneva, IMIA's Vice President for Special Interest Groups and Working Groups. IMIA's Secretary, Dr Bjarte Solheim from Oslo, contributed to the general IMIA pages, and most IMIA representatives offered us material for describing the backgrounds of their respective Societies. A full list of Presidents of Member Societies and addresses is given, and for many Presidents of So-

cieties, for the first time, photographs are included in this Yearbook.

The new structure of the IMIA Board is visible from the description of IMIA. This new structure was realized under the inspiring chairmanship of Dr Marion Ball, IMIA's present chairperson. In the next Yearbooks, attention will also be paid to IMIA's Institutional Members, another initiative that was realized in the past period under Marion's Presidency.

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### *The Selected Articles*

The articles that were selected from

the literature (only 'refereed' journals were used) have been categorized in seven main Sections, all of them preceded by a Synopsis from an invited Guest Editor. These Sections are: *Health and Clinical Management* (Dr G. Hripcsak, Columbia Presbyterian Medical Center, New York), *Computer-Based Patient Records* (Dr A. van Ginneken, Erasmus University, Rotterdam, The Netherlands), *Information Systems* (Dr P. Tang, Northwestern University Medical School, Chicago, USA), *Image and Signal Processing* (Dr S. Andreassen, University of Aalborg, Denmark), *Decision-Support Systems* (Dr M. Fieschi, Hôpital de la Timone A, Marseille, France),

Knowledge Processing (Dr A. Jackson-Smale, Advanced Computing Laboratory, Imperial Cancer Research Fund, London, UK), and *Education* (Dr J.F. Brinkley, University of Washington, Seattle, USA). The articles in these sections offer a representative state-of-the-art view on recent developments in medical and health informatics. The Yearbook is preceded by a Preface from Dr François Grémy, Faculté de Médecine de Montpellier-Nîmes, France, on important philosophical aspects of medical informatics that every investigator and user in this field should take to heart.

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### The Reviews

Review papers were requested from seven experts in fields that primarily deal with the main theme of this Yearbook: Dr Ed Hammond from Duke University Medical Center, Durham, USA: *Hospital Information Systems*; Dr Susan Grobe, University of Texas, Austin TX, USA: *Nursing Informatics: State of the Science*; Dr Casimir Kulikowski, Rutgers University, New Brunswick NJ, USA: *Medical Image Processing in an Era of High-Performance Computing*; Dr Paul Clayton, Columbia Presbyterian Medical Center, New York, USA: *Integrated Advanced Medical Information Systems: Payoffs and Problems*; Drs Marion Ball, University of Maryland at Baltimore, USA, and John Silva, Advanced Research Project Agency, Arlington VA, USA: *Next Generation Health Professional Workstations*; Drs Peter Branger and Joop Duisterhout, Erasmus University Rotterdam: *Communication in Health Care*. Together, these papers offer a very good review on present challenging developments in advanced health care communication, e.g., Kulikowski's paper on nationwide high-performance networks for high data rates; Clayton's paper on networking within hospitals; Hammond's paper on

the future of open hospital information systems; Ball and Silva's paper on open and object-oriented medical/health workstations; and Branger and Duisterhout's paper on communication systems in health care at large.

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### Education and Training

Beginning this year, the Yearbook contains concise descriptions of Education and Training Programs offered at several universities. In this Yearbook, the education and training programs are described at Brigham and Women's Hospital, Massachusetts General Hospital, Tufts New England Medical Center, Massachusetts Institute of Technology, and Harvard School of Public Health, Boston, USA (Drs Bob Greenes, Octo Barnett, Stephen Pauker, Peter Szolovits and Milton Weinstein), Utah University, Salt Lake City, USA (Dr Homer Warner), and the University of Heidelberg (Drs Reinhold Haux and Franz-Joseph Leven). In future Yearbooks additional programs will be described.

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### Reference Lists

All articles in this Yearbook have been categorized in the keyword index list, and a full list of authors has also been included. The same has been done for all articles in the field that appeared in the main medical informatics journals: a full list of titles and an author and keyword index. This information was compiled by the managing editors, with the help of MEDLINE, to which the editors have full access, which is gratefully acknowledged.

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### The 1995 Yearbook

The 1995 IMIA Yearbook of Medical Informatics will be on a very excit-

ing and most current theme: *The Computer-based Patient Record*. Gradually, a host of exciting projects are underway all over the world on this subject. The IMIA Yearbook hopes to offer a representative overview of the state of the art. Companies that are active in this area will also be invited to contribute. Further, we will expand information on trends in the medical/health informatics industry and include another overview on education and training programs.

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### Acknowledgment

The editors acknowledge the valuable contributions of the referees and the guest editors who have given much of their valuable time to the 1994 Yearbook. The editors would also like to thank the high-level contributions by the colleagues who wrote the Review Papers and the contributions in the Education and Training Section. They are also grateful for the time and effort given by the managing editors. Very much work was done by the secretaries of the Dept of Medical Informatics of the Erasmus University Rotterdam, Désirée De Jong and Rosa Scholte in collecting papers and all other material for the Yearbook, corresponding with authors, referees, reviewers, synopsis writers and journal publishers, and preparing the Yearbook for the Publisher. The support of Directorate XIII of the European Union (Dr Niels Rossing) is gratefully acknowledged. The energy of Schattauer Verlag in Stuttgart (Mr Dieter Bergemann) put into publishing the Yearbook, is also gratefully acknowledged. Finally, we want to thank all authors for their willingness to contribute papers to the Yearbook, all IMIA Member Societies, and especially Marion Ball, Jean-Raoul Scherrer, and Bjarte Solheim for their contributions to the Yearbook.

List of Referees who contributed to the selection of articles in the 1994 IMIA Yearbook of Medical Informatics:

C.G. Chute, USA  
P. Degoulet, France  
L. Edenbrandt, Sweden  
R.M. Gardner, USA  
S.M. Huff, USA  
C. Jaffe, USA  
L.C. Kingsland, USA  
E.M.J. Koski, Finland  
F.J. Leven, Germany

C.J. McDonald, USA  
H.-P. Meinzer, Germany  
J. Michaelis, Germany  
K.D. Nielsen, Denmark  
A. Nowlan, UK  
V.L. Patel, Canada  
F. Pincioli, Italy  
S.M. Powsner, USA  
C. Safran, USA

B.G. Solheim, Norway  
W.W. Stead, USA  
T. Takahashi, Japan  
J.L. Talmon, The Netherlands  
G.R. Thoma, USA  
T. Timpka, Sweden  
J. van der Lei, The Netherlands  
J. Wyatt, UK  
J. Zvarova, Czech Republic

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