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Letter from the President

Karl Arne Jessen, President of EFOMP

As we approach the end of 1994 and the start of Röntgen's centenary year, where physics and technology in medicine will naturally be brought into focus, we should take stock. The scientific approach, based on an understanding of nature and explaining natural phenomena, will always have a solid foundation, important in a time where all groups in health care claim to work scientifically. Such a development also creates the possibility for a better understanding and communication using a more common "language" and it will challenge the administrative management to draw more logical conclusions in the chain of decisions. Physicists and Medical Physics will benefit from such a development, but we should not naïvely overlook the more political currents trying to obtain an advantage from hasty and low-budget decision making.

In 1994, EFOMP successfully ran another Summer School, in co-operation with the European Commission, in the field of Medical Physics in Diagnostic Radiology. This was the third in a series of three schools related to the Patient Directive Article 5 (EEC Directive 84/466) which sets out the need for the "qualified expert in radiophysics". The school was held in Nancy in June and was well attended, with 43 students from 15 countries indicating a strong need for such arrangements. Many thanks are due to the local organisers headed by Dr. Alain Noel, and to the French Society. EFOMP does not have the financial capacity to run Summer Schools without seeking external support or alternatively the raising the capitation fee to an unrealistically high level. The Federation has therefore very depended heavily on the support given by the EC and needs to have in mind the optimisation of this support by providing the strongest possible professional and scientific assistance under the constraints or conditions attached to the support. EFOMP will continue its search for potential sources of support, and already in 1995 the Nancy Summer School will be held again at the European Centre for Theoretical Physics in Trieste with support from IAEA and hopefully also from other sources. The education and training of young medical physicists is a very high priority.

Medical Physicists are involved in many aspects of Quality Assurance in health care and have been able to quantify physical and technical parameters essential for such programmes. This has been especially true in relation to radiotherapy, where the precision of dose delivery has found a clinically acceptable and a technically achievable level. To ensure standardization througout Europe EFOMP can play an important role having all physicists "on board" through their national organisations. A valuable co-operation with ESTRO in this area is foreseen in the coming year.

The celebration of the Röntgen centenary will result in many national events. The ECR'95 and the 9th European Congress of Radiology in March in Vienna will of course be a great event in this respect. Once again, EFOMP is involved in sessions on the Physics of Medical Imaging, with Professor John Clifton as our subcommittee chairman. In September 95 the Röntgen Centenary Congress will be held in Würzburg under the aegis of the German Society for Medical Physics together with EFOMP and IOMP. IUPESM will be acting as sponsor. Historical and development aspects of the discovery will be the focal point with an insight on future research. EFOMP Committee and Council Meetings will be held on the same occasion.

See you in Würzburg in September!

EFOMP meets in Aarhus, 7th to 9th October 1994

Wolf Seelentag, Secretary General of EFOMP

For this year's Committee and Council Meetings our Danish colleagues had invited EFOMP to join their Annual Meeting, held in Aarhus. The Marselis Hotel provided both accommodation for all participants and rooms for the meetings. During this well organised event there was little time to enjoy it - but there was also a nice view over Aarhus Bay from our hotel rooms.

The Friday began with interesting lectures on the Medical Physics Profession: we heard about the role of our profession in Danish healthcare, and the interrelation with bioengineering - both from a Scandinavian, and a European viewpoint. Most of us would agree that medical physicists and biomedical engineers should cooperate - actually to do it seems to be easier in some countries than others. The afternoon was devoted to Medical Physics and Radiation Protection of the Patient; coming from a non-EU country I learned a lot about the aims of EU directives, and the way they are prepared, from Dr. Teunen's lecture. Also the other talks provided sufficient points for discussion during the social dinner.

Whilst the Danish colleagues attended a course in brachytherapy physics on Saturday, the EFOMP delegates were treated to a sandwich - Committee Meetings between two Officers' Meetings. Their discussions were reported during the Council Meeting on Sunday, when Karl Jessen, our President, could welcome delegates from 11 member societies. A few more member societies had been represented during the Committee Meetings - an indication for the importance of the work done within the Committees.

The President thanked Jean Claude Rosenwald again for his great effort in chairing the Scientific Committee for the previous three years, and welcomed Fridtjof Nüsslin as the new chairman. The preparations for the Röntgen Centennial Congress to be held in Würzburg from 20th to 23rd September 1995 are progressing as planned. The main topics will be both the history of applications of x-rays, and future developments. All member societies are invited to present the historical development in their countries in poster format - in this way it is hoped to show this history from a European viewpoint. The main conference language will be English - this should help to attract participants from all over Europe : so please, come along to this important event! The date for the 1996 meeting "Medical Physics '96" in Trieste has been shifted to 2nd to 6th September, avoiding a clash with the ESTRO meeting.

The work towards a "Report Clearing House" for the EFOMP "Accident Prevention Scheme" has continued: a good solution seems to be to contribute to the Reporting Scheme planned within IAEA. In this way relevant information would be pooled not only from Europe but world wide; and IAEA would ensure long term financing of the project. Whilst discussions to establish this continue, we also have to make progress within our societies - the scheme relies on information received from member societies : please, begin to discuss with radiotherapists, hospital administrators, ... the possible consequences to establish such a scheme in your country ! John Haywood (Regional Medical Physics Dept., Cleveland Unit, South Cleveland Hospital, Middlesbrough TS4 3BW, U.K.) will provide you with further information on request.

There is also a change in the ETP Committee : Inger-Lena Lamm will take the chair at the end of 1994; Philip Dendy had led the Committee for the last four years - the work had included several policy statements. The President thanked him, and the delegates expressed their appreciation with a long round of applause. The survey on numbers of trained medical physicists was completed, and showed large discrepancies between member societies. So there is a need for further harmonisation. This is also true for registration schemes which would help to strengthen the position of our profession. The ETP Committee had completed some guidelines for setting up registration schemes; the registers would be run by national societies, but would get an "EFOMP stamp of approval" if they complied with these guidelines.

Another important professional matter are staffing levels. In view of more recent national recommendations and an EORTC statement published in "Radiotherapy & Oncology" (with subsequent correspondence), the EFOMP policy statement on this subject needs to be reconsidered. A small working group was set up to do this in close cooperation with ESTRO.

The summer school on Physics of Diagnostic Radiology, organised by Alain Noel and colleagues in Nancy in June 1994, was successful after all - the possibility of repeating this event in 1995 in Trieste, aimed more at colleagues from Central and Eastern Europe, is being discussed with IAEA. For 1996 a summer school on the Physics of Radiotherapy is planned; invitations have been received from Bratislava, Dresden, and Spain. The preparations to hold the 1997 school in cooperation with AAPM continue: the likely subject would be Interventional Radiology, and the school could be held twice, on each side of the Atlantic. In Europe it would be connected with the IOMP conference in Nice.

In conclusion - we have had another informative meeting in a very pleasant setting. 1995 will be an important year for medical physicists: the centennary of the discovery of x-rays. Can you think of a better place to celebrate this than Würzburg ? I can't - and therefore I hope to see many of you there next September (20-23)!

Röntgen Centenary Conference in Würzburg

Germany, September 10-23, 1995

Jürgen Richter, Congress President

100 years ago, Wilhelm Conrad Röntgen discovered X-rays at the University of Würzburg's Institute for Physics. To celebrate this event, the medical physics community from around the world is holding a conference in the Würzburg Congress Centre. The congress organisers are the German Society for Medical Physics (DGMP), EFOMP, IOMP and IUPESM, who are sponsoring the congress.

Invited lectures given by prominent scientists from nine countries will cover key aspects of the effects of X-rays, both in medical applications and elsewhere. The subject areas are:

Röntgen's life and work;
the state of physical science at the end of the 19th century;
the influence of Röntgen's work on the development of physics and the physicists' view of the world; X-rays in the universe;
the development of radiation dosimetry;
the development of radiation research and radiation protection;
the history of ionisation chamber dosimetry;
the development of X-ray diagnosis;
the development of radiotherapy;
modern trends in diagnostic imaging;
modern trends in radiotherapy.

About ninety proffered papers will cover not only radiation physics but also other fields of Medical Physics, and all will be represented in the accompanying poster exhibition. The posters will be discussed in two Poster Sessions. In addition, National Societies for Medical Physics will be displaying posters illustrating the development of the medical uses of X-rays in their countries, in a special "national poster" exhibition.

A large industrial exhibition is planned. At the time of writing, 80% of the available space has been reserved. To give participants adequate time to visit the exhibitions, the intervals between sessions have been made longer than usual.

A traditional Franconian-style evening event is planned, in the particularly appropriate setting of the Wine Press Hall of the "Bürgerspital". Röntgen's daughter lived in the retirement home located in the Bürgerspital for 20 years until her death in 1992.

The Congress is complemented by an attractive programme for accompanying persons. The University of Würzburg is organising an exhibition of "100 years of X-rays", which will be of interest to all, and will be well worth visiting. Additionally, it is worth visiting the Röntgen Memorial Place in the old physical institute. The laboratory where X-rays were discovered has been preserved and equipped with historical instruments.

The registration fee has been set at an exceptionally low level. Until the end of July, the registration fee is only DM 120, which represents exceptional value for such a conference. Registration details are available from:

Die Kongress-Partner
Bottenhorner Weg 16
D-60489 Frankfurt
Germany
Tel: (+49) 69-785050
Fax: (+49) 69-785049

Two further invited lectures go beyond physical science, and are of special interest. Professor Spindler (Innsbruck, Austria) will speak on "Research on the Ice Man", the 5000 year old human remains found recently in a glacier. The investigation includes the use of X-rays. Professor van de Weetering, from the Rijksmuseum in Amsterdam (Netherlands) will speak on "X-Rays and Art, demonstrated on Rembrandt's work". Professor van de Weetering has kindly offered to give his lecture in recognition of the contribution which X-rays have made to his work.

The success of the congress depends on your participation. I look forward to being able to welcome you to Würzburg in September!

Biomedical Radiation Physics Teaching

Yves Lemoigne, Coordinator of the Biomedical Radiation Physics Study Line, European Scientific Institute

The European Scientific Institute (ESI) based on the border between France and Swizerland, is devoted to high-level, postgraduate teaching needed for the transfer of the latest technologies between Research and potential users such as Medicine.

With specialised courses in Biomedical Physics, one aim of ESI is to give access to top level knowledge which will allow physicists to apply and further improve the latest developments of detectors, imaging and accelerators for use in fields like Diagnostic Radiology, Nuclear Medicine and Radiotherapy within their home institutions.

This will clearly be complementary to existing teaching in some European countries at graduate or postgraduate level.

The courses will help to satisfy the requirement for research in the medical applications of high level radiation physics which is continuing to increase. ESI will contribute mainly through the development of new detectors allowing reduced radiation dose, through novel Medical Imaging techniques and by developing new uses of accelerators.

To prepare the definition and the practical organisation of the study line, a workshop was held in mid October. Experts from some 14 countries participated. In parallel, a detailed investigation about present teaching of Biomedical Physics in Europe and future needs was carried out via the national representatives of the European Federation of Organisations for Medical Physics (EFOMP). Answers were received from 18 countries.

The Workshop was organised in three parts: first there was a review of emerging technologies in accelerators, detectors and imaging, which could be useful in Medical Physics in the coming years. Then came a review of training, teaching and needs for Medical Physics in some European countries. The third part was devoted to a discussion of the manner in which ESI could fulfil these needs, at least in part. This was done with the help of the Chairmen of two EFOMP committees (Prof Nüsslin from Tübingen, chairman of the Scientific Committee, and Dr Dendy from Cambridge chairman of the ETP Committee). The workshop suggested an organisation at three levels:

Level 1

The highest level will consist of one-week seminars devoted to selected topical subjects which will be extensively discussed. The intended audience comprises senior physicists and heads of Medical Physics. Such seminars will aim to provide the opportunity to initiate practical transfers of technology between high energy physics and medical physics. This will lead to an improverd understanding of technical possibilities versus needs, and thus to the initiation of research projects.

It is expected that the symposia could start as early as Easter 1995, with a topic such as 'Medical imaging and new types of detector'. Many other topics have been suggested, including:

- Conformal Radiotherapy
- Functional Imaging
- Algorithms and mathematics for Imaging
- Dosimetry and microdosimetry
- Quality Assurance in Radiology and Radiotherapy
- Radiopharmaceuticals
- Non-ionising Biomedical Diagnostics

Level 2

These will be high-level courses aimed at advanced postgraduate students or physicists wishing to participate in research in medical physics. In line with ESI's orientation, these courses will be equipment and research oriented, with emphasis placed on detectors, accelerators, imaging and practical training connected to these fields. The present scheme envisages a teaching programme organised in two terms including practical sessions. Part of the practical training will be arranged in expert centres in Europe and coordinated by ESI.

Level 3

In response to the need expressed by some countries for help in starting postgraduate training programmes, some additional basic lectures may be added to the Level 2 programme, to provide basic Medical Physics teaching.

The Workshop maintained the principle that the three levels should be put in place gradually: two one-week symposia in 1995 (Level 1), in Spring and Autumn, a module of High Level courses (Level 2) in 1996, with Level 3 following later.

Constitution of ESI

ESI was formed early in 1994 as a non-profit association. As soon as regulations (being prepared by the European Union) will allow, ESI will become a European Association. The members of the Association are Universities or Research Institutions, companies, private societies, local public authorities and bodies in Europe that are automatically entitled to membership by virtue of their contribution to the operation of the Association.

Members

Centre Universitaire & Recherche d'Archamps	Archamps (France)
II Faculty of Sciences, University of Milano at Como	Como (Italy)
Geneva University	Geneva (Switzerland)
Institute of Theoretical and Experimental Physics	Moscow (Russia)
Moscow Physical and Technological University	Moscow (Russia)
IN2P3-LAPP Research Laboratory	Annecy-le-Vieux (France)
Charles University	Prague (Czech Republic)
Uppsala University	Uppsala (Sweden)
University of Mines and Metallurgy	Krakow (Poland)
Cancer Centre and Institute of Oncology	Warsaw (Poland)
Compact Detector Systems (commercial company)	Thoiry (France)

Some universities belonging to the CLUSTER network (10 European universities of Science and Techology) are under contract with ESI:

Technische Hochschule	Darmstadt (Germany)
INPG and J Fourier University	Grenoble (France)
Universitat (T H)	Karlsruhe (Germany)
Ecole Polytechnique Fédérale	Lausanne (Switzerland)

The association is open to universities or companies wishing to join.

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rolled for this first course, including 20 physicists; 8 of these are aiming for the "Fachanerkennung".

The Society organises annual scientific meetings, often in cooperation with the German and/or Austrian Medical Physics Societies, or the Swiss Society for Biomedical Engineering. Roughly once a year symposia on topics of special interest are arranged (1 or 2 days), for example on treatment planning systems, magnetic resonance processes, or predictive assays. Working groups publish recommendations (e.g. dosimetry protocols) and reports (e.g. on national dosimetry intercomparisons). A Bulletin with 2 or 3 issues per year helps to spread information amongst the members.

Although Medical Physics in Switzerland is not as developed as in other European countries, our Society is fairly strong and active. This is possible by close cooperation with colleagues in related fields: a society combined with radiation biologists, attracting almost all senior radiotherapists as members, and cooperating with the Biomedical Engineers - the postgraduate course at ETHZ being an obvious example. So there is hope for improvement, including areas of medical physics outside the applications of ionising radiation.