

## Preface

This special issue contains an essential part of the contributed papers given at regular topical sessions of the 1983 European Optical Conference (EOC'83): **Optics in Science and Practice** held in Rydzyna, Poland, from May 30 to June 4, 1983.

The papers published in this number of *Optica Applicata* are those which were submitted by the Authors to the Organizing Committee before the end of August 1983 and were admitted by the Scientific Committee at the two largest (of five) Topical Sections, i.e.: 1. *Laser spectroscopy, nonlinear interactions of photons, and recent optical problems in laser physics*, and 3. *Image formation and analysis*.

The other papers will be published in the next number of *Optica Applicata*.

The Organizing Committee of the EOC'83 would like to thank very much all the Contributors for their papers and fruitful cooperation.

*Maksymilian Pluta*  
Chairman of the EOC'83  
Organizing Committee

## **European Optical Conference (EOC' 83):**

### **Optics in Science and Practice**

The successive Conference of European Optical Committee — EOC'83 was held at Rydzyna near Leszno (Poland) from May 30 to June 4, 1983. The conference was organized by the following institutions: European Optical Committee, Optical Division of the Polish Society of Mechanical Engineers (SIMP) and Educational Centre of the SIMP with participation of: Central Optical Laboratory (Warszawa, Poland), Institute of Physics — Adam Mickiewicz University (Poznań, Poland), Institute of Physics — Technical University of Wrocław (Wrocław, Poland), Institute of Design of Precision and Optical Instruments — Technical University of Warsaw (Warszawa, Poland). The conference was held under the auspices of Polish Physical Society and Section of Optics and Spectroscopy of Physics Committee of Polish Academy of Sciences. The Organizing Committee was headed by Prof. Maksymilian Pluta — Vice-President of European Optical Committee. The Chairman of the conference was Prof. Tadeusz Skaliński — the President of the Polish Physical Society and Vice-President of International Optical Committee. Prof. Franciszek Kaczmarek performed the duties of the President of the Scientific Committee replacing Prof. S. Lowenthal. The conference was attended by about 220 scientists (including 7 participants from Czechoslovakia, 7 participants from Hungary, 3 participants from France, 5 participants from Spain, 2 participants from East Germany, 1 participant from Egypt, 2 participants from Rumania, 3 participants from Bulgaria, 1 participant from Finland and 1 participant from China, Prof. A. Drobnik currently employed at Port Harcourt represented Nigeria). Also the meeting of European Optical Committee presided by EOC President — Prof. A. Maréchal from France, with participation of the EOC Secretary-General — Prof. J. Bescós from Spain, took place during the conference.

The agenda of this meeting included:

1. *Introductory evaluation and the course of the conference at Rydzyna.*
2. *Organization of next EOC Conference.*
3. *Incorporation of EOC in European Physics Society (EPS).*

The first item of the agenda was reported by Prof. Franciszek Kaczmarek. Referring to the second item Prof. A. Maréchal and Prof. J. Bescós informed the participants that the next conference — EOC'84 — will be held from October 8 to October 12, 1984 in Amsterdam. It will comprise the following topics: laser and electrooptic measurements, applied holography, new lasers, optical information processing, optical sensors, etc. In the third item the participants

were informed about the far-advanced process of incorporation of EOC in EPS under the temporary sign *Optics Division*. The representatives of the more important Polish optical centres and several visitors from abroad were invited to participate in the EOC meeting.

As far as the conference at Rydzyna is concerned, despite the absence of several invited speakers, the conference proceeded harmoniously enough, participation in the plenary section and poster sessions being numerous and vivid. The day before the conference in the evening, Prof. A. Piekara — professor of physics at the Sułkowskis' grammar-school in Rydzyna between the two World Wars — had a talk on this well known school. The interesting history of the palace was also excellently presented by its present director.

The conference was formally opened on May 30 by Prof. T. Skaliński. In his pronouncement Prof. T. Skaliński referred to the long tradition of optical conferences and against this background he discussed more important topics of these conferences. He also mentioned the co-authors of contemporary optics.

The plenary papers included a very wide range of problems from quantum optics, through classical and instrumental optics and optical processing (beam transformation, holography) to the application of optics in biomedicine. The range of problems covered by Section Communications and Poster Sessions was equally wide which fully corresponds to the conference title — *Optics in Science and Practice*. For the illustration we mention here the following papers: *Problems in the preparation of optical coatings* by E. Pelletier (France), *Some applications of white light image processing* by J. Bescós (Spain), *Diameter measurements of fibres and wires by laser* by A. Podmaniczky (Hungary), *Theory and applications of optical systems using periodic structures* by K. Patorski (Poland), *Planar waveguide lenses* by J. Sochacki (Poland), *On squeezed states and photon correlations in nonlinear optical phenomena* by S. Kielich and R. Tanaś (Poland), *Investigation of neoplastic cell behaviour in vitro with the light microscope* by P. Veselý (Czechoslovakia), *Application of optical diffractometry for analysis of morphological structures of cells tissues* by A. Dziedzic-Gosławska, K. Ostrowski, M. Różycka, S. Lenczowski, A. Wojtowicz (Poland), *Spectral properties of dye lasers* by W. Brunner (East Germany), *Recent developments in phase conjugate optics by degenerate four-wave mixing* by A. Kujawski (Poland), *Inverse source problem in optics* by I. Wilk (Poland), *A precise measurement of reflectivity of the laser cavity mirrors* by Feng Tiesun (China).

Especially big attention of participants was focussed on the poster sessions due to the great carefulness in preparation of posters considering both their content and the graphical form. In sum, about 150 scientific communications were presented, among which about 2/3 were presented by the authors in the three parallel sections. The section meetings gathered relatively large number of listeners although the discussion after the presented communications was sometimes too decent, which resulted mainly from rather poor knowledge of spoken English. According to Prof. A. Maréchal the conference proceeded on the high scientific level. The wide range of topics enabled each participant

to choose the problems of his interest. Summing up the conference the floor was taken by Prof. T. Skaliński, Prof. A. Maréchal — President EOC, and Prof. F. Kaczmarek.

The great contribution of Prof. Maksymilian Pluta, Mrs. M. Sochacka, and Doc. Dr. K. Patorski as well as of the other members of the Organizing Committee to the conference organization should be emphasized here. Due to their effort the conference proceeded very competently in the beautiful palace of Sułkowskis'. The park surrounding of the palace gave the additional possibilities of walks and discussion. The only day of interval in the conference (Corpus-Christi) enabled the participants to get acquainted with the most beautiful places in Wielkopolska region. On the last but one day of the conference, in the evening, there was the fire with beer and "bigos", honoured by performance of a regional group. Also the chamber concert given by very talented violinist Asa Konishi-Jankowska and soprano singer Maria Pawlaczyk became a big attraction of this day.

It should be also mentioned that the conference was accompanied by the Exhibition of Science and Technology, where the industrial and scientific centres (PZO, CLO, COBRABID, Institute of Optoelectronics — Military Technical Academy, the Sylwester Kaliski Institute of Plasma Physics and Laser Microfusion Institute of Telecommunication, Institute of Design of Precision and Optical Instruments — Technical University of Warsaw) presented their newest achievements and products (for more details see next page).

*Franciszek Kaczmarek*