



**Sheraton-Park Hotel, Washington, D.C., October 16-22**

### Papers Program

The importance of high-speed photography in research is well illustrated by the technical papers received for the Fifth Congress. Eighty per cent of the authors are from research activities, while the remainder represent the engineering and developmental aspects of private industry. Of the 80 per cent engaged in research, 40 per cent are employed by government agencies in the U.S. and abroad.

While the Fifth Congress has been in preparation many inquiries have come in from universities, government institutions and commercial manufacturers for help in solving specific problems in their research and development programs. Undoubtedly, the wide variety of equipment, techniques and personal experience represented at the Congress will provide a basis for solutions to many of these.

For example, there have been many requests for information on microscopic high-velocity cutting action. At least five papers to be presented will be helpful in this regard, and access will be available to approximately ten individuals who have devised instrumentation systems adaptable for this purpose. Also, interest has been expressed in the photography of non-Newtonian liquids, the formation of droplets and the atomization of liquids; no less than ten papers from European and American research activities deal with developments related to such techniques.

Nor will the actual papers presented be the only means of help on specific problems: among the general registrants at the Congress, in addition to the authors of papers, will be many whose accumulated years of experience can be drawn on in general or private discussion.

An announcement of the sessions of the Congress in the July *Journal* listed the majority of the papers by titles and authors. Other information has been mailed to the membership in a booklet. The Advance Program with abstracts in English, French and German will appear in the September *Journal*.

### Papers From Abroad

The high degree of interest in instrumentation and high-speed photography and in the work of these International Congresses on the part of experts overseas, particularly in England, France and Germany, is shown by the large number of papers submitted from abroad. Through the hands of Dr. J. S. Courtney-Pratt, Associate Chairman for Papers From Abroad, have passed 40 of the 97 technical papers finally approved for inclusion in the program.

Most of the best known and most respected scientists in the field are represented, and many of them will be at the Congress in person to deliver their papers. One of the best known of all, Dr. Hubert Schardin, Director of the Institut Franco-Allemand de Recherches de St. Louis, France, is Deputy Chairman of the Congress and National Delegate from West Germany. Dr. Schardin's research in ballistic photography and his contribution to the Cranz-Schardin system are world famous. In recognition of his accomplishments he has been nominated to be the first recipient of a newly established SMPTE award, the E. I. du Pont Gold Medal Award, which will be presented during the Congress.

Other notable visitors from Germany will include Dr.-Ing. Frank Früngel, of the well-known firm of the same name in

Hamburg, manufacturers of high-power, high-frequency stroboscopic light sources; and Dr. W. Kinder, of Carl Zeiss.

The National Delegate from France, Colonel P. Fayolle, of the Laboratoire Central d'Armement, Arcueil, has also done much work in the field of ballistic photography, particularly in connection with the use of high-voltage spark techniques. Dr. P. Devaux, another expert at the Laboratoire Central, is a specialist in range instrumentation and precise chronometry. Other contributors from France are Mlle. M. Merle and F. Canac of the Centre de Recherches Scientifiques, Industrielles et Maritimes de Marseille, where aerodynamic and jet studies are carried out; Willy Diamant of the Office National de Ponderie, concerned with the atomization of liquid fuels; C. Veret and Michel Philbert of the Office National d'Etudes et de Recherches Aeronautiques, working on discharge lamps and reciprocity failure; and J. Viard of the Poudrerie Nationale, engaged in explosives research and high-speed flash X-rays, and M. Cloupeau, of the Laboratoire de Recherches Electroniques de la Sorbonne.

More than a dozen papers from England have been scheduled, evidence of the considerable degree of interest there in photographic instrumentation techniques. The National Delegate, Dr. R. F. Saxe, of Queen Mary College, London University, has been responsible for much work in the area of high-voltage physics and electronic instrumentation. Dr. W. D. Chesterman, of the Royal Naval Scientific Service, was an active organizer of the Third Congress, in London, and is known particularly for his research in underwater and other naval applications of high-speed photography. He is chairman of the U.K. Committee on High-Speed Photography and the author of a book well-known in the field, *Photographic Study of Rapid Events*. Another English contributor, R. B. Collins, of Ilford Ltd., was editor of the *Proceedings of the Third Congress*, and also for several years editor of the *Journal of Photographic Science*.

The Atomic Weapons Research Establishment at Aldermaston, Berks, where ultra-high-speed, rotating-mirror cameras are in use, is sending several representatives including E. W. Walker, whose field covers high-voltage X-ray equipment and high-speed Kerr-cells, and K. R. Coleman, A. Skinner and George H. Lunn. From the National Physical Laboratory at Teddington will come R. J. North, active in schlieren and interferometric work in connection with aerodynamic and wind-tunnel studies. Dr. E. J. G. Beeson, of A. E. I. Lamp and Lighting Co., will discuss xenon flashtubes and high-power lighting; and from the A.E.I. Research Laboratory, Robert A.

*Continued on page 550*



*SPSE Symposium on High-Speed Processing (in conjunction with the Congress) will be held on October 14 and 15 at the Shoreham Hotel, Washington, D.C. For registration information write Mr. Joseph Mangiaracina, 300 Brook Ave., Little Silver, N.J., or ask SMPTE headquarters.*

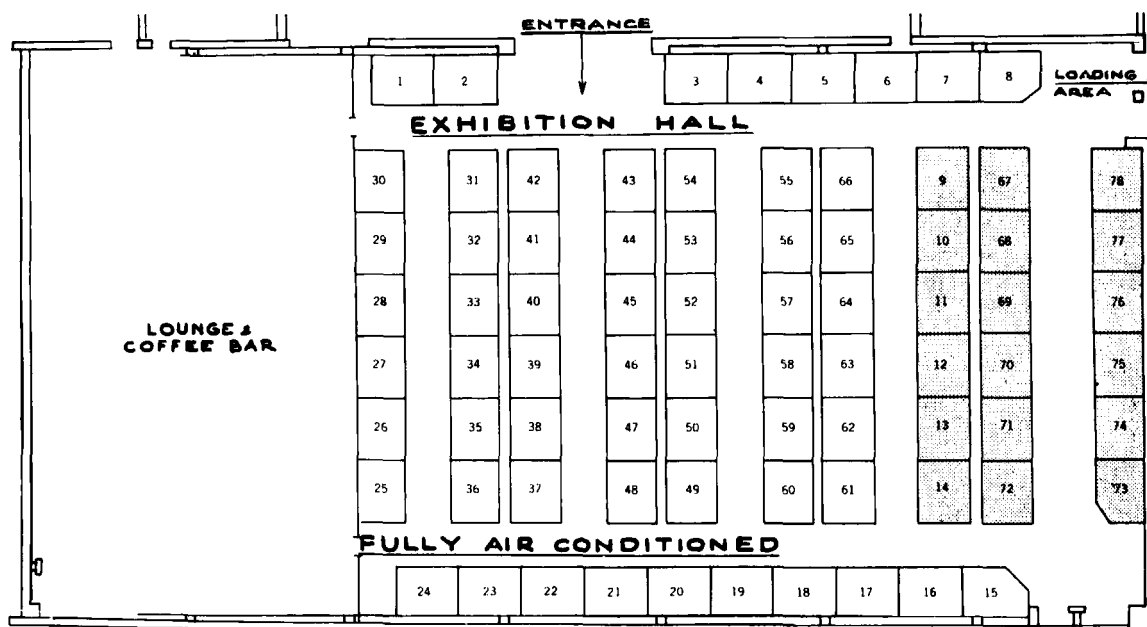
# Exhibit



## Fifth International Congress on High-Speed Photography

Displays and demonstrations of instrumentation and high-speed photographic equipment from manufacturers all over the world. See the newest developments in specialized electronic, optical and mechanical photographic instrumentation devices for all applications.

**Government and Industry Exhibits will be featured.**



### FOR RESERVATIONS

contact the Exhibit Chairman:  
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### EXHIBIT SPACE RENTAL RATES

Booths 1-2-3-4-30-31-42-43-54-55	\$350
Booths 15 to 19 incl. and 61 to 66 incl.	250
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Booths 9 to 14 and 67 to 78 inclusive are being reserved for military and institutional exhibits.  
 All booths are 8 x 10 ft in size.

**October 17-21, 1960**

**SHERATON-PARK HOTEL, WASHINGTON, D.C.**

Chippendale and J. R. Folkes will deal with electronic image intensification.

Other authors from England whose names are well known in high-speed photography circles include Dr. J. H. Brunton, of Cambridge University; J. S. McVeagh and J. N. Whyte, of the Armament Research and Development Establishment at Sevenoaks; L. Mandell, of Imperial College, London University; and Dr. Ronald Jackson, of the British Coal Utilization Research Association.

National Delegates who will be presenting papers include Dr. G. Nahmani, from Israel, on ballistic photography; Prof. Kartar Singh, from India, on the photography of explosive gases; Dr. F. Topfer, from Belgium, on an analysis method for high-speed films; and T. Uyemura, from Japan, on a new ultra-high-speed camera.

### Hotel Rates

Reservation forms are included in the brochure which was mailed earlier this month to members (additional copies are available from SMPTE headquarters); intending registrants sending reservations direct to the Sheraton-Park Hotel, Washington 8, D.C., should mention that the purpose of their visit will be to attend the Fifth Congress.

Room rates at the Sheraton-Park Hotel are as follows:

Singles -- \$9.85, 11.00, 12.50, 14.00, 20.00  
 Twins -- \$12.50, 13.85, 15.00, 16.50, 20.00  
 Suites (1 Bedroom) --- \$19.00, 22.00, 27.00, 35.00  
 Suites (2 Bedrooms) — \$45.00, 55.00, 65.00

### Equipment Exhibit

Those attending the Fifth Congress will find a large and varied assortment of specialized equipment displayed, covering every aspect of photographic instrumentation techniques and engineering. As an adjunct to the technical program, these displays should prove of use and interest in a general sense to those seeking new equipment and, in many cases, to those looking for engineering solutions to specific problems.

The complete list of companies participating will not be known until the Congress opens, but at the beginning of August the following companies had already reserved space:

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|---|---|
| Animation Equipment, Inc.                 | Karl Heitz, Inc.                        |
| Arriflex Corp. of America                 | Hi-Speed Equipment, Inc.                |
| Avco Research & Advanced Development Div. | Hitachi Ltd.                            |
| Beckman & Whitley, Inc.                   | L-W Products, Inc.                      |
| Benson-Lehner, Inc.                       | Motion Picture Enterprises              |
| Camera Equipment Co.                      | Neumade Products Corp.                  |
| Computer Measurements Co.                 | D. B. Milliken Co.                      |
| E. I. du Pont de Nemours & Co.            | O'Connor Engineering Laboratories, Inc. |
| Eastman Kodak Co.                         | Photo-Animation, Inc.                   |
| Edgerton, Germeshausen & Grier, Inc.      | Photo-Sonics, Inc.                      |
| Fairchild Camera & Instrument Corp.       | Polaroid Corp.                          |
| Field Emission Corp.                      | Precision Laboratories Div.             |
| Filmline Corp.                            | Prestoseal Mfg. Corp.                   |
| Oscar Fisher Co.                          | Sylvania Electric Products, Inc.        |
| Flight Research, Inc.                     | Traid Corp.                             |
| Florman & Babb, Inc.                      | Westinghouse Electric Co. Lamp Div.     |
| Dr.-Ing. Frank Früngel GmbH               | Wollensak Optical Co.                   |
| General Aniline & Film Corp.              | Carl Zeiss, Inc.                        |
| Anso                                      | Zoomar, Inc.                            |
| Systems Development Dept.                 |   |
| Heico, Inc.                               |   |

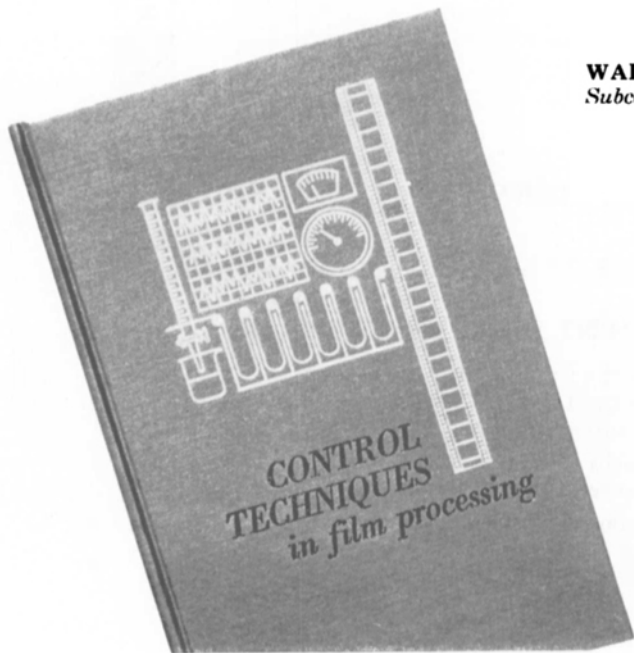
## a new SMPTE publication

# CONTROL TECHNIQUES IN FILM PROCESSING

Prepared by a Special Subcommittee of the Laboratory Practice Committee of the Society of Motion Picture and Television Engineers

WALTER I. KISNER  
 Subcommittee Chairman

Foreword by E. H. REICHARD  
 Chairman, Laboratory Practice Committee



### CHAPTERS

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|--|--|
| 1. Introduction                                      | 6. Control Strips and Sensitometric Curves                           |
| 2. General Principles                                | 7. Sensitometric Control of a Standardized Process                   |
| 3. General Aspects of Motion-Picture Film Processing | 8. Chemistry of Film Processing                                      |
| 4. Mechanical Evaluation and Control                 | 9. Chemical Analysis and Control                                     |
| 5. Instruments for Photographic Control              | 10. Economic Considerations in Establishing a Process Control System |

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