



DENVER, COLORADO • AUGUST 2 THROUGH AUGUST 7, 1970

## Technical Film Sessions

Two special evening sessions during the 9th Congress will be wholly devoted to motion-picture films. **Carlos H. Elmer**, Congress Chairman, and **Robert D. Shoberg**, Program Chairman, have scheduled Monday and Tuesday evenings, August 3 and 4, for these special film presentations, with discussions to be conducted in English (other sessions having simultaneous translations for French, German and Russian).

These film presentations will be up to thirty minutes in length, with the preprints and Congress *Proceedings* coverage of these somewhat shorter than for other papers.

A short description of some of these presentations follows:

In "High-Speed Photography of Particle Motion in a Disc Refiner," by D. Atack and W. D. May, Pulp and Paper Research Institute of Canada, Montreal, to determine the efficiency of an experimental plate pattern, it was desirable to determine the overall pattern of flow of the material (wood chips) through a disc refiner over periods of several seconds (to make pulp), and to determine the alignment and movement of individual particles comprising the flow. This was achieved partially through the use of high-speed flash-synchronized photography, recording the movement of particles over short time intervals at a rate of 8000 frames/s.

"The Rotor Burst Protection Program" by G. J. Mangano, Naval Air Propulsion Test Center, Philadelphia, describes an experimental rotor-spin facility which has a high-speed photographic system and computerized photo-film analyzer. This facility studies and analyzes associated impact phenomena and dynamic deformation processes of aircraft jet-engine rotor burst or failure.

"Applications of High-Speed Motion Pictures to Textile and Apparel Manufacturing" by A. Ralston, Burlington Industries, Inc., Greensboro, NC, concerns the use of high-speed motion pictures for training, and for textile and apparel manufacturing.

"Measuring the Angular Deflection of the Saturn II Engines" by D. H. Peterson, Consultant, Glendale, CA, was done by installing instrumentation cameras on the static firing-test stand to record engine-thrust chamber alignment on two of the four outboard engines of the second-stage Saturn launch vehicle used in Apollo/Saturn flights. The magnitude of the angular deflection is a measure of the compliance-mode natural frequency, which is an important parameter in the design of the flight-control system.

The presentation for "Stresses Occurring During Rotary Peeling of Veneer" by B. E. Fox, Canadian Forestry Service, Vancouver, B.C., demonstrates how high-speed cameras photograph the process of peeling a log to show the defects that occur between the knife tip and the roller pressure bar.

"Use of High-Speed Photography in the Scientific Research Institute of Agricultural Machinery" by J. Kalina, Research Institute of Agricultural Machinery, Prague,

Czechoslovakia, shows how high-speed motion pictures are used to investigate such problems in machine operation as defects in machine mechanisms, defects in the processing and transport of material by these mechanisms and studies of the existence and course of the processes, determinations of the kinematic values of the mechanisms and of the conveyed and processed materials, and overall investigations of the strength, kinematic and power parameters using strain gage equipment with parallel high-speed photography.

"Hammer-Throwing Techniques Analyzed by High-Speed Photography" by S. K. Joshi, University of Birmingham, England, discusses the use of high-speed cameras for athletic studies, at relatively low rates. Pictures taken from above and to the side of the thrower are shown to him to correct his performance.

In "Obtaining Maximum Space/Time Data on Periodic Phenomena in Minimum Time (Jet Observations Around  $10^6$  Frame/s)" by L. P. Poldervaart and F. H. M. Jongma, University of Technology, Eindhoven, The Netherlands, correlation of the flow field with the sound field of a two-dimensional supersonic air jet requires the employment in concert of two fundamentally different technical disciplines: acoustics and visualization. Combined systems of synchro-strobe film and synchro-strobe TV proved superior to Cranz-Schardin, rotating-mirror and single-picture techniques, from the point of view of collecting time, image quality, resolution, storage and display.

"High-Speed Motion Pictures of the Near-Wakes of Axisymmetric Bodies" by W. R. Sieling, Bell Telephone Laboratories, Inc., Whippany, NJ, describes a special color schlieren system which utilizes high-speed motion-picture photography with the Rutgers Axisymmetric Near-Wake Tunnel (RANT) to investigate the steady and transient near-wake flow fields of axisymmetric bodies. Talc particles are traced to provide a qualitative description of the near-wake, and to aid in the understanding and analysis of the base flow problem.

"Flow Visualization in a Rotary Cement Kiln" by F. D. Moles and P. B. Lain, University of Surrey, Guildford, England, depicts the use of tracers of flow patterns during heat transfer in rotary cement kilns, using high-speed photography.

"Motion-Picture Photography of High-Speed Impact Tensile Fracture" by C. Miyata and T. Tsumura, Faculty of Engineering, Kanagawa University, Yokohama, and A. Muramatsu, Tokyo Medical and Dental University, Tokyo, Japan, concerns the recording of deformation and fracture of two low-carbon steels in a rotating-disc-type, high-speed, impact tensile testing machine.

"The Application of Dissection Cameras for Investigations of Fast-Going Processes" by S. M. Provornov, O. F. Grebennikov and V. P. Gousev, The Leningrad Institute of Motion Picture Engineers, USSR, describes the characteristics and applications of several types of dissection cameras.

These film sessions have been arranged for the two evenings to be of interest not only to the delegates, but also

to families attending the Congress, for they have found the film presentations in the past to be of special interest.

Other Congress sessions include an educational seminar and papers on holography and lasers, rotating mirror and raster cameras, image converters, equipment papers by exhibiting firms, lighting, flash and x-rays and applications of high-speed photography.

The entire program, including abstracts in English of all the papers in all of the sessions, will appear in the July issue of the *Journal*.

All persons registering for the Congress will be admitted to all functions of the Congress, with the exception of hotel accommodations. Congress registration includes admission to all sessions, exhibit grand opening reception and banquet, Wednesday excursion and luncheon at Colorado Springs and the US Air Force Academy, and farewell dinner dance on Thursday of Congress week. Complete registration fees for the week are \$90.00 for delegates and \$45.00 for accompanying persons. Tickets for one day only are available at the rate of \$20.00 for any one day. Information and registration forms are available now from Society Headquarters.

# 108th Technical Conference and Equipment Exhibit

October 4-9 at the New York Hilton Hotel



At the May 14 meeting of the 108th Conference Papers Program Committee: standing, from left to right, K. Blair Benson, John G. Baer, Irving S. Rosner, Richard T. Monroe, Edgar A. Schuller, Charles Jantzen, Leo Beiser and Edward P. Bertero; seated: Joseph A. Flaherty, Jr., Nathan Alper and Paul F. Wittlig.

SMPTE Conference Vice-President **E. B. McGreal**, Editorial Vice-President **Rodger J. Ross** and Papers Committee Chairman **Allan L. Williams** have announced **Joseph A. Flaherty, Jr.**, CBS Television Network, 51 W. 52 St., New York, NY 10019, as the Program Chairman for the 108th Technical Conference.

General Arrangements Chairman is **Herbert R. Pilzer**, Motion Picture Enterprises, Inc., Tarrytown, NY 10591. Exhibit Chairman is **Dominick J. Capano**, SOS Photo-Cine-Optics, 40 Kero Rd., Carlstadt, NJ 07072; assisted by **Victor James**, Arriflex Corp. of America, 25-20 Brooklyn-Queens Expy. W., Woodside, NY 11377.

Continuing with the successful two-day symposium format, on Thursday and Friday of Conference week the 108th will feature technical papers and discussions on the topic of CATV. The program will have specially invited papers and speakers to present the fullest discussions possible on the state of CATV. Chairman of the two-day Symposium on CATV is **G. Norman Penwell**, Director of Engineering, National Cable Television Association, 918 16 St., N.W., Washington, DC 20006.

## Call for Papers Requirements and Deadlines

Three copies of a 500- to 750-word synopsis of the paper (about two pages of double-spaced type-writing on format sheets supplied by the Society), giving the paper's objective and a summary of content should be sent to SMPTE Headquarters, Att: 108th Conference Program, 9 E. 41 St., New York, NY 10017. Synopses should be received at Headquarters by June 15, 1970, with three copies of the *Author Form* and the *Author Information Sheet*. The synopses will be published in a *Synopses Booklet* and will be used to prepare a 50- to 75-word abstract for the Program in the Conference issue of the *Journal* (September).

By August 28, 1970, the original and three copies of the manuscript should be sent to SMPTE Headquarters, Att: 108th Conference Program. Manuscripts will be reviewed as prospects for *Journal* publication.

For information about Author Forms and sub-