James E. McIntyre III[1]

40 Years and More of Tire Science and Technology: A History of The Tire Society

REFERENCE: McIntyre, J. III, **"40 Years and More of Tire Science and Technology: A History of The Tire Society,"** *Tire Science and Technology*, TSTCA, Vol. 50, No. 2, April–June 2022, pp. 100–187

ABSTRACT: In the late 1960s in the United States, public interest in motor vehicle safety was at an all-time high, resulting in the National Traffic and Motor Vehicle Safety Act, the Highway Safety Act, and the creation of the National Highway Traffic Safety Administration. Around 1970, a group of industry scientists saw a need for a forum for creation of useful tire standards and dissemination of scientific knowledge about tires. This led to the formation of the American Society for Testing and Materials (ASTM) Committee F-09 on tires in 1971. In 1972, the committee began publication of the journal *Tire Science & Technology* (*TSTCA*), the first peer-reviewed journal dedicated exclusively to scientific articles on tires. In 1979, ASTM ceased publication of the journal, and in 1980, members of F-09 incorporated The Tire Society to continue publication. In 1982, The Tire Society held its first annual Conference on Tire Science and Technology. Nearly 40 years later, the society has been through many changes, but the journal, the annual conference, and the core mission of encouraging and disseminating knowledge about tire science and technology remain. Through a review of documents and interviews with members of the society, this article seeks to comprehensively document the history of The Tire Society.

KEY WORDS: history, journal, officers, editors, conference

1 Background

For more than 40 years, The Tire Society has been dedicated to disseminating knowledge and stimulating the innovation of tires as it pertains to tire science, engineering, and technology [1]. With its mission of advancing all areas of tire science and technology and operating as a volunteer-run not-for-profit, The Tire Society is the only organization of its kind.

The journal *Tire Science and Technology* (*TSTCA*), which predates the founding of the society and which serves as one of the society's main means of communication with its membership, is the world's only peer-reviewed technical journal dedicated exclusively to tire science and technology.

Since 1982, the society has held an annual meeting and conference at which authors present technical papers intended for journal publication. These meetings are attended by more than 100 scientists each year representing tire and auto makers, suppliers to the tire industry, end users of tires, and

[1] Corresponding author. Bridgestone Americas Technical Center, 10 East Firestone Boulevard, Akron, OH 44301, USA. Email: mcintyrejames@bfusa.com

academics with an interest in tire technology from organizations around the world.

How did this come to be, and how and why have the society and its journal continued to grow and evolve for nearly 50 years?

2 Regulatory Environment (1959–1975)

In the United States starting in the late 1950s and continuing through the 1960s, there was an increased focus on public safety. Rightly or wrongly, government regulation came to be seen as a necessary check on industry. This era of legislative activism resulted in the Clean Air Act (1970), the Clean Water Act (1972), and other wide-ranging federal laws.

The first major U.S. public initiative to regulate tires occurred in New York State. As chairman of the Joint Legislative Committee on Motor Vehicles and Traffic Safety, Republican State Senator Edward Speno [2] began investigating the need for tire safety legislation around 1959. His interest led to legislative hearings, visits to tire company headquarters, and, in 1964, proposed state legislation. Initially, the tire industry cooperated with Senator Speno to have a voice in the proposed legislation. However, late in 1963, automotive industry representatives made it clear that they would be in "total opposition to any tire legislation" [3]. A period of intensive lobbying ensued. Although New York's State Senate eventually passed a tire regulation bill, the bill was never allowed to come to a vote of the state assembly.

By the time of Speno's death in 1971, he had been involved with more than 45 state laws dealing with auto or traffic safety, and his advocacy resulted in a 1965 agreement by auto manufacturers to install seat belts as standard equipment [4]. It is believed, but the author cannot yet document, that Speno's committee was also responsible for a tire industry agreement to set 2/32 in. as the height for tread-wear indicator bars.

Around 1964, the U.S. Senate began discussing the need for legislation on tires [5], and in 1965, its Commerce Committee held a series of hearings on proposed tire safety legislation [6]. At around the same time, Nader's book, *Unsafe at Any Speed* [7], increased public awareness of concerns regarding tire and automotive safety.

Important U.S. federal legislation during this period included the Highway Safety Act of 1966; the National Traffic and Motor Vehicle Safety Act of 1966, which created the National Highway Safety Bureau and which required that a uniform tire quality grading system be created [8]; the Highway Safety Act of 1970, which established the current National Highway Traffic Safety Administration (NHTSA) under the U.S. Department of Transportation; and the Motor Vehicle Information and Cost Savings Act of 1972.

TABLE 1— *Members of TACT.*

Name[a]	Organization
F Cecil Brenner (Chairman)	NBS Office of Vehicle Systems Research (later NHTSA)
Samuel Clark	University of Michigan
Jack Davisson	Goodyear
Fred Kovac	Goodyear
Von Polhemus	General Motors
I. Robert Ehrlich	Stevens Institute of Technology
Other representatives of major U.S. tire companies (including Walter and Veith)	

[a]Information from the author's oral interviews of Joe Walter and Alan Veith.

The development of a uniform tire quality grading system was a major reason for the creation of both American Society for Testing and Materials (ASTM) F-09 and The Tire Society, but the requirement in the National Traffic and Motor Vehicle Safety Act to publish such a system may actually have come about due to a misunderstanding [9]. In 1964, Wisconsin Senator Gaylord Nelson proposed a bill requiring the creation of such a system. That bill did not pass. In 1966, Nelson added an amendment to the National Traffic and Motor Vehicle Safety Act requiring that the Secretary of Commerce publish a uniform tire quality grading system within 2 years. Although the amendment was adopted, several senators apparently had misunderstood it as calling for a feasibility study, rather than for actual tire-grading regulations. Nevertheless, passage of the amendment led to a flurry of governmental activity.

In 1965, Dr. F. Cecil Brenner, a textile chemist, joined the National Bureau of Standards, and in 1967, he was named chief of the Tire Systems section at the Office of Vehicle Systems Research and charged with creation of a Uniform Tire Quality Grading System [10]. Recognizing the need for tire and auto industry involvement in creation of this system, Brenner created the Technical Advisory Committee for Tires (TACT; see Appendix A and B).

Although the author has not located any formal written records from TACT, Table 1 shows the names of some individuals who are known to have participated in its meetings. TACT was active from approximately 1967 to 1970 [12. 13]. TACT is believed to have met semi-annually, with meetings in Washington, DC; Ann Arbor, Michigan; Hoboken, New Jersey; and Akron, Ohio. During these meetings, General Motors' representative criticized the tire industry for its lack of published fundamental research [12].

3 Founding of ASTM F-09 (1971)

Seeking a more official forum for the creation of technical standards related to tires, Brenner approached the ASTM and requested that it create a committee on tires. In 1971, ASTM committee F-9 on tires (now F-09) was formed, and Brenner became its first chairman. F-09 has met semi-annually since its

TABLE 2 — *ASTM F-09 committee officers.*[a,b]

Year	Chairman	First vice chairman	Second vice chairman	Recording secretary	Membership secretary
1971	**F. Cecil Brenner**				
1972	**F. Cecil Brenner**				
1973	**F. Cecil Brenner**	James Curley	**Fred Kovac**	Charles Hyer	Leonard Segel
1974	**F. Cecil Brenner**	James Curley	**Fred Kovac**	Charles Hyer	Harry Williams
1975	**F. Cecil Brenner**	Harold Clemett	**Fred Kovac**	Charles Hyer	Earl Bishop
1976	**F. Cecil Brenner**	Harold Clemett	**Floyd Conant**	Charles Hyer	Earl Bishop
1977	**F. Cecil Brenner**	Harold Clemett	**Floyd Conant**	Charles Hyer	Earl Bishop
1978[c]	**Harold Schwartz**	David Coddington	Jack Davis	Walter Bergman	Earl Bishop

[a]Information obtained from TSCTA cover pages 1973–1978, which list F-09 officers.
[b]Individuals in bold were also Tire Society officers.
[c]A list of F-09 chairmen after Schwartz was provided by Bill Janowski. In order, they are: Jerry Potts, Dick Pierce, Bill Janowski, Don Young, Dick Pierce, Bob Courtney, Bruce Lindenmuth, Steve Padula, David Howland, John Harris, John Kohler.

creation, and it continues to be active today. To date, it has created 40 technical standards.

Tables 2 and 3 show a list of F-09 officers during the period of interest. This information appears in early issues of the *Journal of Tire Science and Technology*. Highlighted individuals later served as Tire Society officers.

F-09 has a sister committee. Committee E-17 on pavement was founded in 1960, and its membership includes state and federal highway officials as well as representatives from tire, automotive, university, and other interests. The two committees have held numerous joint meetings and technical symposia over the years. The author is a long-standing member of both committees.

F-09's scope statement reads: "the development of tire standards (test methods, practices, and definitions, excluding specifications), to identify the performance characteristics of tires and the criteria to be used to measure and evaluate these characteristics." Furthermore, "The Committee shall encourage such research on tires . . . and shall provide forum for the presentation, and discussion of engineering and scientific information related to tire characteristics and performance" [14].

From its outset, F-09 has developed standard test methods and practices, but its bylaws specifically forbid it from specifying any performance levels for consumer tires. This has not stopped other organizations from using F-09 standards to specify their own performance thresholds.

One example of this is the ASTM F1805 standard test method for driving traction on snow [15]. F1805 (first published in 1997) defines a method that can be used to compare tire winter driving performance against a standard tire design (ASTM F2493). However, F1805 does not include any performance thresholds and does not provide any definition of what constitutes an acceptable level of winter tire performance.

TABLE 3 — *ASTM F-09 subcommittee officers.*[a,b]

	F-09.10		F-09.20		F-09.30		F-09.93
Year	Chair	Vice chair	Chair	Vice chair	Chair	Vice chair	Papers and symposia
1971							
1972							
1973	Louis Marick	**Samuel Clark**	Harold Clemett	**Harold Schwartz**	Henry Hodges	**Floyd Conant**	Robert Ehrlich
1974	Louis Marick	**Samuel Clark**	Harold Clemett	**Harold Schwartz**	Henry Hodges	**Floyd Conant**	Robert Ehrlich
1975	Louis Marick	Ted Knowles	**Gerald Potts**	Walter Bergman	Henry Hodges	**Floyd Conant**	**Harold Schwartz**
1976	Louis Marick	Ted Knowles	**Gerald Potts**	Walter Bergman	Henry Hodges	Charles Meier	**Harold Schwartz**
1977	Louis Marick	Ted Knowles	**Gerald Potts**	Walter Bergman	Joe Ambelang	Frederic Basel	**Harold Schwartz**
1978	Louis Marick		**Gerald Potts**		Joe Ambelang		C.C. McCabe

[a]Information obtained from TSCTA cover pages 1973–1978, which list F-09 officers.
[b]Individuals in bold were also Tire Society officers.

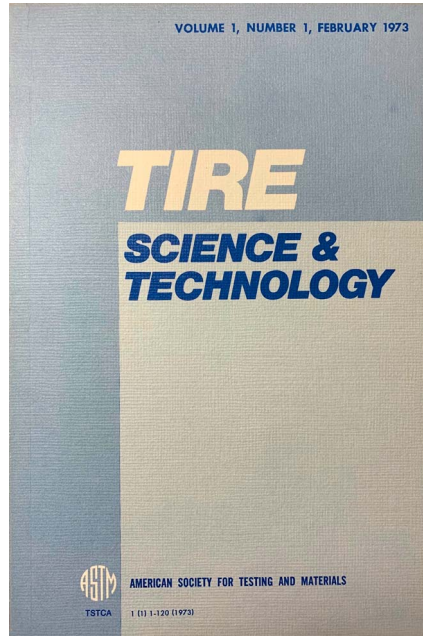


FIG. 1 — *Cover of the first journal.*

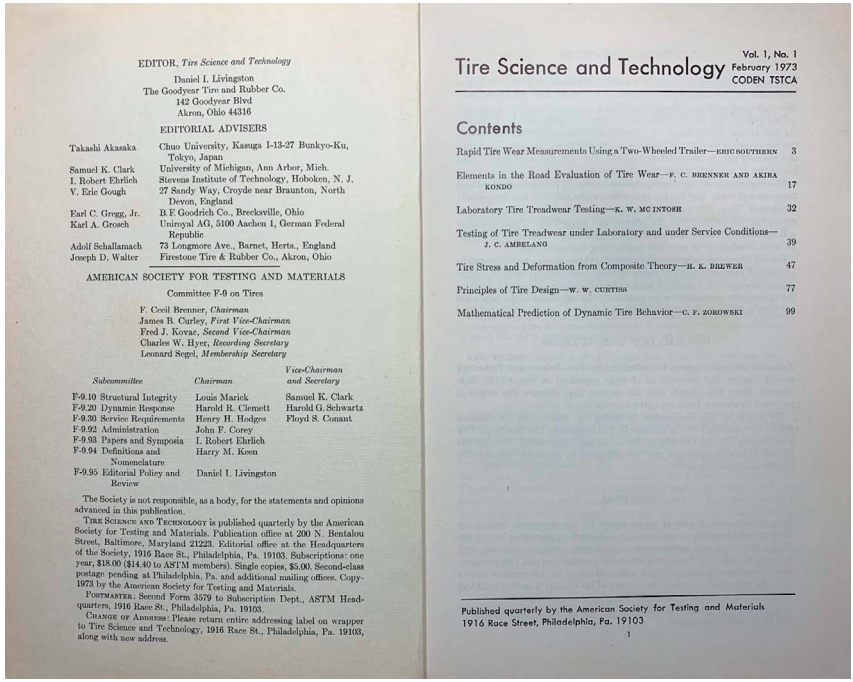
In 1999, the Rubber Manufacturers Association (now U.S. Tire Manufacturers Association [USTMA]) issued its Technical Information Service Bulletin (TISB) 37 [16], referencing the test method in ASTM F1805 and establishing a performance threshold of 110% of a standard tire. Tires that exceed this threshold can be marked with the Severe Snow Use symbol, commonly called the three-peak mountain snowflake.

Both the NHTSA in its FMVSS 139 [17] and the United Nations Economic Commission for Europe (UNECE) in its Regulation 117 [18] now incorporate the USTMA threshold and ASTM test procedure into their regulatory requirements. Thus, even though F-09 does not publish performance thresholds, its standards can provide a powerful tool for other organizations wishing to do so.

4 F-09 Technical Seminars and the Early Years of the Journal (1973–1979)

For its first few years, F-09 had a dual purpose:

1. to develop technical standards, and
2. to act as a forum to disseminate scientific research.



TIRE SCIENCE AND TECHNOLOGY is published quarterly by the American Society for Testing and Materials. Publication office at 200 N. Bentalou Street, Baltimore, Maryland 21223. Editorial office at the Headquarters of the Society, 1916 Race St., Philadelphia, Pa. 19103. Subscriptions: one year, $18.00 ($14.40 to ASTM members). Single copies, $5.00. Second-class postage pending at Philadelphia, Pa. and additional mailing offices. Copyright 1973 by the American Society for Testing and Materials.

POSTMASTER: Second Form 3579 to Subscription Dept., ASTM Headquarters, 1916 Race St., Philadelphia, Pa. 19103.

CHANGE OF ADDRESS: Please return entire addressing label on wrapper to Tire Science and Technology, 1916 Race St., Philadelphia, Pa. 19103, along with new address.

Tire Science and Technology

Vol. 1, No. 1
February 1973
CODEN TSTCA

Contents

Published quarterly by the American Society for Testing and Materials
1916 Race Street, Philadelphia, Pa. 19103

FIG. 2 — *First journal, inside cover.*

In 1973, through ASTM, F-09 began publishing *TSTCA*, hereafter called "the journal." Figure 1 shows the front cover of the first journal. The cover layout was designed by Sam Fielding-Russell of The Goodyear Tire & Rubber Company (see Appendix A) [11]. Figure 2 shows the inside cover of the first issue. For a historian, the printed paper journals provide a wealth of additional information, including the publisher and the names of officers.

To obtain papers for the journal, F-09 held a series of technical symposia. Generally, these symposia occurred during the morning of the first day of each of the committee's 2-day semi-annual meetings. Table 4 contains a list of technical symposia, dates, and topics. These were determined by reviewing journal articles and other materials.

During this time, a significant number of journal articles appear to have come from other sources. These include presentations at the Rubber Division of the American Chemical Society, the Akron Rubber Group, and various NHTSA technical reports. In addition to articles published in the journal, ASTM F-09 and E17 also published several bound collections of related papers as Special Technical Publications (STP). These are listed in Table 5.

During the period when ASTM published the journal, articles were reviewed and edited by members of F-09 (see Appendix A) [11]. There was an

TABLE 4 — *ASTM F-09 technical symposia.*[a]

Dates	Location	Symposium on:
Nov 11, 1971	Akron, OH	Tire Treadwear
May 10, 1972	Lanham, MD	Tire Traction
—[b]		
May 9, 1973	Washington, DC	Nondestructive Testing of Tires
Nov 14, 1973	Akron, OH	Tire Uniformity and Vibrational Characteristics
May 8, 1974	Dearborn, MI	Tires and Fuel Economy
Nov 13, 1974	Akron, OH	Off-the-Road Tire Performance and Cornering Characteristics of On-Road Tires
—		
Nov 12, 1975	Akron, OH	Indoor Tire Testing
—		
May 19, 1976	Cleveland, OH	General Subjects
Nov 10, 1976	Akron, OH	Tread Wear
May 1977	Cleveland, OH	Tire Noise and Vibration[c]
Nov 15, 1977	Akron, OH	General Subjects
May 10, 1978	Cleveland, OH	General Subjects[c]
May 14, 1980	Akron, OH	Finite Element Analysis of Tires
May 13, 1981	Akron, OH	[d]
Nov 11–13, 1981	Akron, OH	Frictional Interaction of Tire and Pavement (with E-17)
Jun 5–7, 1985	Columbus, OH	(Papers published in STP-929)

[a]Information obtained from review of *TSCTA* journal articles.
[b]Dash indicates possible additional symposia not represented in journal articles.
[c]Symposia topics are listed, but no journal articles cite these symposia.
[d]The journal does not contain any papers from this session. However, photos of a symposium exist that are dated May 13, 1981, and are in the same location as November 1981 photos.

Editor (Daniel Livingston) and a staff of editorial advisers (advisors). Because the editing and soliciting of papers was done by a few volunteers, it was often difficult to maintain a regular schedule of publication.

The process of editing, typesetting, and publishing a journal is laborious. Given the small initial readership, it is unlikely that this was a highly profitable venture. For several years, ASTM threatened to cease publication, and in 1978,

TABLE 5 — *Related ASTM special technical publications (STPs).*[a]

STP	Date	Title	Committee	No. of papers
STP-583	1975	Surface Texture Versus Skidding: Measurements, Frictional Aspects, and Safety Features of Tire-Pavement Interactions	E-17	10
STP-793	1983	Frictional Interaction of Tire and Pavement	F-09	16
STP-929	1986	The Tire Pavement Interface	F-09/E-17	11
STP-1164	1992	Vehicle, Tire, Pavement Interface	E-17	11
STP-1225	1994	Vehicle-Road Interaction	E-17	16

[a]These are bound volumes of technical papers published separately by ASTM.

the committee was notified that ASTM would stop publishing the journal unless the committee could guarantee a sales volume of at least 500 issues and a more regular publication schedule [19]. Publication of the journal by ASTM ceased in November 1978. At this point, although the activities of ASTM F-09 continued, the journal entered a period of hiatus.

5 Founding of The Tire Society (1979–1980)

Several senior members of F-09 including Brenner, Livingston, Kovac, and Samuel Clark felt that the journal could continue to serve a useful purpose. A decision was made to form a separate organization that would continue the symposia and publication of the journal. Key in this decision were Daniel Livingston and Fred Kovac, both of Goodyear. Kovac, a Goodyear vice president, arranged for Goodyear to assist in the creation of the society, and Goodyear provided both legal and financial assistance in its creation.

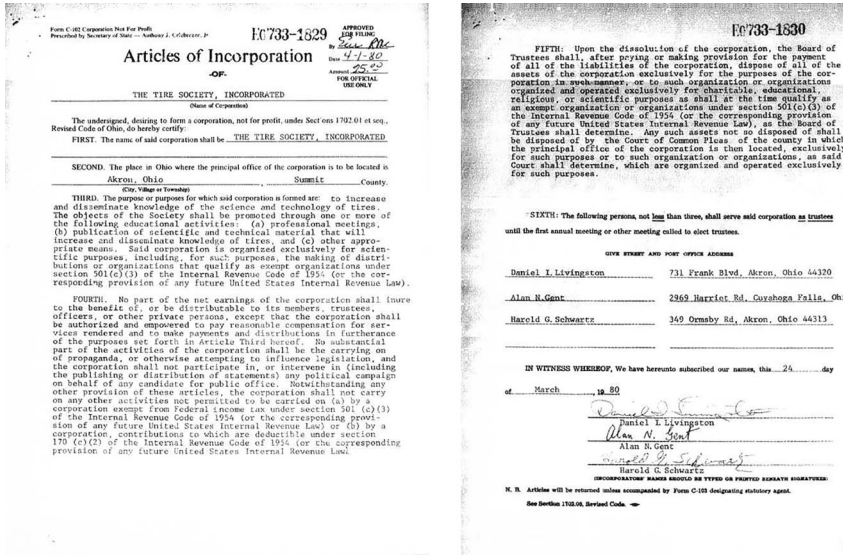
The actual creation of the society required several years. At an ASTM F-09 committee meeting in 1978, Daniel Livingston announced that The Tire Society was being formed to continue publication of the journal. A constitution and bylaws were drafted and circulated among committee members, and, during a "recess" of the ASTM Committee, a vote was taken on whether to form the society. The vote was in favor, and the society informally began (see Appendix C).

Although the organization did not yet have any legal standing, beginning in 1979, the journal masthead began to list the publisher as The Tire Society.

Alan Gent, a professor of polymer engineering at the University of Akron and its dean of graduate studies, had recently founded the Adhesion Society in partnership with the University of Akron, and his experience was tapped as a model for the new society. Gent was also a consultant to Goodyear Research.

While numerous meetings of both TACT and F-09 had been held in Akron and Cleveland, Ohio, each of those bodies also regularly met in other locations. When The Tire Society was formed, it was decided that it should be headquartered in Akron, as Akron had the preponderance of U.S. tire company headquarters at that time. As a result, several people not local to Akron (e.g., Cecil Brenner) were less able to participate in the active running of the society.

The Tire Society was officially incorporated on April 1, 1980. Figure 3 shows the articles of incorporation. The original trustees were Daniel Livingston of Goodyear, Alan Gent of the University of Akron, and Harold Schwartz of DuPont. Schwartz became the first president of the society. Gent acted as a liaison to the university but was not actively involved in the governance of the society. Registration with the U.S. Copyright Office was completed on November 8, 1982 (see Appendix C).



Articles of Incorporation

THE TIRE SOCIETY, INCORPORATED

The undersigned, desiring to form a corporation, not for profit, under Sections 1702.01 et seq., Revised Code of Ohio, do hereby certify:

FIRST. The name of said corporation shall be THE TIRE SOCIETY, INCORPORATED

SECOND. The place in Ohio where the principal office of the corporation is to be located is Akron, Ohio, Summit County.

THIRD. The purpose or purposes for which said corporation is formed are: to increase and disseminate knowledge of the science and technology of tires. The objects of the Society shall be promoted through one or more of the following educational activities: (a) professional meetings, (b) publication of scientific and technical material that will increase and disseminate knowledge of tires, and (c) other appropriate means. Said corporation is organized exclusively for scientific purposes, including, for such purposes, the making of distributions or organizations that qualify as exempt organizations under section 501(c)(3) of the Internal Revenue Code of 1954 (or the corresponding provision of any future United States Internal Revenue Law).

FOURTH. No part of the net earnings of the corporation shall inure to the benefit of, or be distributable to its members, trustees, officers, or other private persons, except that the corporation shall be authorized and empowered to pay reasonable compensation for services rendered and to make payments and distributions in furtherance of the purposes set forth in Article Third hereof. No substantial part of the activities of the corporation shall be the carrying on of propaganda, or otherwise attempting to influence legislation, and the corporation shall not participate in, or intervene in (including the publishing or distribution of statements) any political campaign on behalf of any candidate for public office. Notwithstanding any other provision of these articles, the corporation shall not carry on any other activities not permitted to be carried on (a) by a corporation exempt from Federal income tax under section 501 (c)(3) of the Internal Revenue Code of 1954 (or the corresponding provision of any future United States Internal Revenue Law) or (b) by a corporation, contributions to which are deductible under section 170 (c)(2) of the Internal Revenue Code of 1954 (or the corresponding provision of any future United States Internal Revenue Law).

FIFTH: Upon the dissolution of the corporation, the Board of Trustees shall, after paying or making provision for the payment of all of the liabilities of the corporation, dispose of all of the assets of the corporation exclusively for the purposes of the corporation in such manner, or to such organization or organizations organized and operated exclusively for charitable, educational, religious, or scientific purposes as shall at the time qualify as an exempt organization or organizations under section 501(c)(3) of the Internal Revenue Code of 1954 (or the corresponding provision of any future United States Internal Revenue Law), as the Board of Trustees shall determine. Any such assets not so disposed of shall be disposed of by the Court of Common Pleas of the county in which the principal office of the corporation is then located, exclusively for such purposes or to such organization or organizations, as said Court shall determine, which are organized and operated exclusively for such purposes.

SIXTH: The following persons, not less than three, shall serve said corporation as trustees until the first annual meeting or other meeting called to elect trustees.

	GIVE STREET AND POST OFFICE ADDRESS
Daniel I. Livingston	731 Frank Blvd, Akron, Ohio 44320
Alan N. Gent	2969 Harriet Rd. Cuyahoga Falls, Ohio
Harold G. Schwartz	349 Ormsby Rd, Akron, Ohio 44313

IN WITNESS WHEREOF, We have hereunto subscribed our names, this 24 day of March, 19 80

Daniel I. Livingston

Alan N. Gent

Harold G. Schwartz

(INCORPORATORS' NAMES SHOULD BE TYPED OR PRINTED BENEATH SIGNATURES)

N. B. Articles will be returned unless accompanied by Form C-105 designating statutory agent.

See Section 1702.06, Revised Code.

FIG. 3 — *Tire Society articles of incorporation.*

Among the early officers of the society, it is interesting to note the preponderance of chemists. Brenner, Kovac, and Schwartz were all chemists with backgrounds in textiles and reinforcements; Livingston, Gent, and Benko all worked in polymer chemistry. Of the active officers, only Samuel Clark (University of Michigan) represented academia and tire mechanics.

6 The Goodyear Era (1979–1985)

The first few years of the society were a time of figuring out how the organization would work. During this period, Goodyear's assistance, both financial and in volunteers, was essential to the society. That happened in large part because of the enthusiastic support of Fred Kovac.

Kovac engaged Mort Leggett, Goodyear's manager of publications, as the journal's consulting editor. The Goodyear Aerospace print shop, under the direction of Leggett, prepared the plates and printed the journal at their cost, which was paid by the society. Kovac recruited David Benko, a new Goodyear hire, to be the society's first treasurer and business manager. Later, he asked his executive secretary, Mechelle Miller, to assist with local arrangements for the conference, something she continued to do for the society for many years.

Since no paper journals had been issued in 1979 or 1980, a decision was made around 1981 to publish two journal issues for each year, back-dating these to 1979 and 1980. These are the first issues of the journal labeled as "published

by The Tire Society." However, the cover artwork and inside formatting remain the same as during the ASTM era.

Publication timing continued to be irregular. The January 1980 journal contains an advertisement for the 1982 conference. The July 1980 journal contains an advertisement for the 1983 conference, suggesting that it was published sometime after March 1982.

Between 1982 and 1984 a second gap occurred in publishing the journal. This period coincides with a change in journal editors.

Even though the editorial board had as many as 17 editorial advisors during Livingston's tenure, a number of these were honorary appointments. The journal review and publication process was typically handled by just a few individuals, with the result that publication was sporadic. This difficulty in publishing journals in a timely fashion had been a contributory factor in ASTM's decision to discontinue publication [20].

To improve the timeliness of journal production, Raouf Ridha (also of Goodyear) and Floyd Conant, of Standards Testing Labs, were recruited as associate editors. Ridha took over as editor around 1985, continuing in that role until 1995.

When publishing of the journal resumed around 1985, the Executive Committee (XCOM) accepted Ridha's recommendation to publish one physical volume of the journal for each of the 2 skipped years (see Appendix C). Thus, Ridha is shown as the editor for 1983–1995. All articles in the 1982 through 1984 volumes came from the 1982 conference.

7 Evolution of the Journal

Table 6 summarizes journal publication over the years.

Ridha's term as editor was characterized by several significant changes. In 1986, Goodyear ceased publication of the journal, and it was necessary to find another publisher. Ridha identified Lancaster Press in Lancaster, Pennsylvania, as the most economical commercial publisher. As shown in Figure 4, the change in publishers is clearly visible in the paper copies of the journal that the author received from Marion Pottinger. The Goodyear-published journals are slightly smaller in height and width. Lancaster-published journals used "perfect binding" instead of stapled "loop stitch" binding.

Throughout the journal's existence, its basic layout and cover art have remained remarkably similar, as shown in Figure 5. After further discussion with Lancaster Press, Ridha determined that a cost savings would be realized by keeping the journal cover a single color (instead of changing the color each year, as had been the previous practice) and thus began the era of blue covers [21].

TABLE 6 — *Tire Society journal issues and publisher.*

				Issue/number 1			Issue/number 2			Issue/number 3			Issue/number 4			
Year	Vol.	No. of issues	No. of books	Month	No. of articles	No. of pages	Month	No. of articles	No. of pages	Month	No. of articles	No. of pages	Month	No. of articles	No. of pages	Publisher
1973	1	4	4	Feb	7[a]	120	May	7	134	Aug	3	94	Nov	4	98	ASTM
1974	2	4	4	Feb	5	76	May	5	86	Aug	4	70	Nov	5	104	ASTM
1975	3	4	4	Feb	5	64	May	5	68	Aug[b]	4	80	Nov	5	68	ASTM
1976	4	4	4	Feb	4	56	May	5	96	Aug	5	64	Nov	5	43	ASTM
1977	5	4	4	Feb	4	77	May	4	47	Aug	5	44	Nov	4	68	ASTM
1978	6	4	4	Feb	4	76	May	4	84	Aug	3	52	Nov	4	68	ASTM
1979	7	4	2[c,d]	Jan–Jun	3	40	Jul–Dec	3	49							TS[g] (Goodyear)[h]
1980	8	4	2[d]	Jan–Jun[e]	3	19	Jul–Dec[f]	2	50							TS (Goodyear)
1981	9	4	1	Jan–Dec	2	25										TS (Goodyear)
1982	10	4	1[j]	Jan–Dec[i]	4	51										TS (Goodyear)
1983	11	4	1[j]	Jan–Dec[i]	4	63										TS (Goodyear)
1984	12	4	1[j]	Jan–Dec[i]	4	65										TS (Goodyear)
1985	13	4	4	Jan–Mar	4	64	Apr–Jun	3	59	Jul–Sep	3	60	Oct–Dec	1	48	TS (Goodyear)
1986	14	4	4	Jan–Mar	3	72	Apr–Jun	4	64	Jul–Sep	3	61	Oct–Dec	4	94	TS[k]
1987	15	4	4	Jan–Mar	4	70	Apr–Jun	5	99	Jul–Sep	4	71	Oct–Dec	3	54	TS
1988	16	4	4	Jan–Mar	3	60	Apr–Jun	4	66	Jul–Sep	4	71	Oct–Dec	4	76	TS
1989	17	4	4	Jan–Mar	4	84	Apr–Jun	5	72	Jul-Sep[l]	5	77	Oct–Dec	4	92	TS
1990	18	4	4	Jan–Mar	2	65	Apr–Jun	4	68	Jul–Sep	4	80	Oct–Dec	4	80	TS
1991	19	4	4	Jan–Mar	3	65	Apr–Jun	4	55	Jul–Sep	3	55	Oct–Dec	3	72	TS
1992	20	4	4	Jan–Mar	3	72	Apr–Jun	3	57	Jul–Sep	3	65	Oct–Dec	4	70	TS
1993	21	4	4	Jan–Mar	3	63	Apr–Jun	3	71	Jul–Sep	3	65	Oct–Dec	3	60	TS
1994	22	4	4	Jan–Mar	4	74	Apr–Jun	3	70	Jul–Sep	3	60	Oct–Dec	3	68	TS
1995	23	4	4	Jan–Mar	4	69	Apr–Jun	3	66	Jul–Sep	3	73	Oct–Dec	4	74	TS
1996	24	4	4	Jan–Mar[m]	5	91	Apr–Jun	4	89	Jul–Sep	5	95	Oct–Dec	5	91	TS
1997	25	4	4	Jan–Mar	4	76	Apr–Jun	4	76	Jul–Sep	4	76	Oct–Dec	4	72	TS
1998	26	4	4	Jan–Mar	4	62	Apr–Jun	4	68	Jul–Sep	4	75	Oct–Dec	4	71	TS
1999	27	4	4	Jan–Mar	4	60	Apr–Jun	3	65	Jul–Sep	4	77	Oct–Dec	3	74	TS

TABLE 6 — Continued.

				Issue/number 1			Issue/number 2			Issue/number 3			Issue/number 4			
Year	Vol.	No. of issues	No. of books	Month	No. of articles	No. of pages	Month	No. of articles	No. of pages	Month	No. of articles	No. of pages	Month	No. of articles	No. of pages	Publisher
2000	28	4	4	Jan–Mar	4	69	Apr–Jun	4	68	Jul–Sep	4	71	Oct–Dec	4	68	TS
2001	29	4	4	Jan–Mar	4	64	Apr–Jun	4	68	Jul–Sep	4	64	Oct–Dec	4	72	TS
2002	30	4	4	Jan–Mar	4	58	Apr–Jun	4	75	Jul–Sep	4	79	Oct–Dec	3	76	TS
2003	31	4	4	Jan–Mar	3	63	Apr–Jun	4	64	Jul–Sep	4	75	Oct–Dec	3	67	TS
2004	32	4	4	Jan–Mar	3	53	Apr–Jun[n]	4	64	Jul–Sep	3	69	Oct–Dec[n]	3	75	TS
2005	33	4	4	Jan–Mar[o]	3	62	Apr–Jun	3	72	Jul–Sep	3	56	Oct–Dec	4	48	TS
2006	34	4	4	Jan–Mar[p]	3	82	Apr–Jun	4	65	Jul–Sep	4	69	Oct–Dec	5	58	TS
2007	35	4	4	Jan–Mar	4	68	Apr–Jun	4	93	Jul–Sep	5	89	Oct–Dec	4	75	TS
2008	36	4	4	Jan–Mar	4	79	Apr–Jun	4	76	Jul–Sep	4	86	Oct–Dec	3	62	TS
2009	37	4	4	Jan–Mar	3	59	Apr–Jun	3	78	Jul–Sep	4	86	Oct–Dec	5	116	TS
2010	38	4	4	Jan–Mar	4	98	Apr–Jun	4	82	Jul–Sep	4	64	Oct–Dec	3	63	TS
2011	39	4	4	Jan–Mar	3	58	Apr–Jun	4	102	Jul–Sep	4	62	Oct–Dec	4	61	TS
2012	40	4	4	Jan–Mar	3	58	Apr–Jun	4	92	Jul–Sep	4	68	Oct–Dec	3	53	TS
2013	41	4	4	Jan–Mar	4	79	Apr–Jun	3	72	Jul–Sep	4	74	Oct–Dec	3	68	TS
2014	42	4	4	Jan–Mar	3	56	Apr–Jun	3	58	Jul–Sep	4	83	Oct–Dec	4	107	TS
2015	43	4	4	Jan–Mar	3	84	Apr–Jun	4	96	Jul–Sep	4	78	Oct–Dec	4	79	TS
2016	44	4	4	Jan–Mar	4	72	Apr–Jun	4	76	Jul–Sep	4	76	Oct–Dec	4	66	TS
2017	45	4	4	Jan–Mar	4	84	Apr–Jun	4	76	Jul–Sep	4	81	Oct–Dec	4	93	TS
2018	46	4	4	Jan–Mar	4	52	Apr–Jun	4	74	Jul–Sep	4	114	Oct–Dec	4	87	TS
2019	47	4	4	Jan–Mar	4	100	Apr–Jun	4	71	Jul–Sep	4	85	Oct–Dec	4	77	TS
2020	48			Jan–Mar	4	75	Apr–Jun	4	90	Jul–Sep						TS

[a]The count of articles does not include editorial notes, indexes, obituaries, or other nontechnical content.
[b]Pages of the printed journal for this issue are out of order and missing.
[c]The journal has always ostensibly published four issues per year, but in some years, these were combined into fewer physical books.
[d]The "1979" and "1980" journals were actually published after 1981.
[e]This issue contains an advertisement for the 1982 conference.

TABLE 6 — Continued.

[f]This issue contains an advertisement for the 1983 conference.
[g]After 1978, The Tire Society is listed as the journal publisher.
[h]From 1979–1985, typesetting and printing was done in house by Goodyear Aerospace.
[i]All papers in these issues are from the 1982 conference.
[j]The 1983, 1984, and possibly the 1982 journal volumes were published around 1985 and back dated.
[k]The Tire Society contracted with Lancaster Press for publishing of the journal. Lancaster also took over production (typesetting).
[l]July 1989 is the first issue of the journal to list society officers.
[m]The Publications Committee is not listed after 1996.
[n]These journal volumes include a CD containing article content.
[o]In 2005, articles were first published on The Tire Society website.
[p]In 2006, the online version of the journal was created.

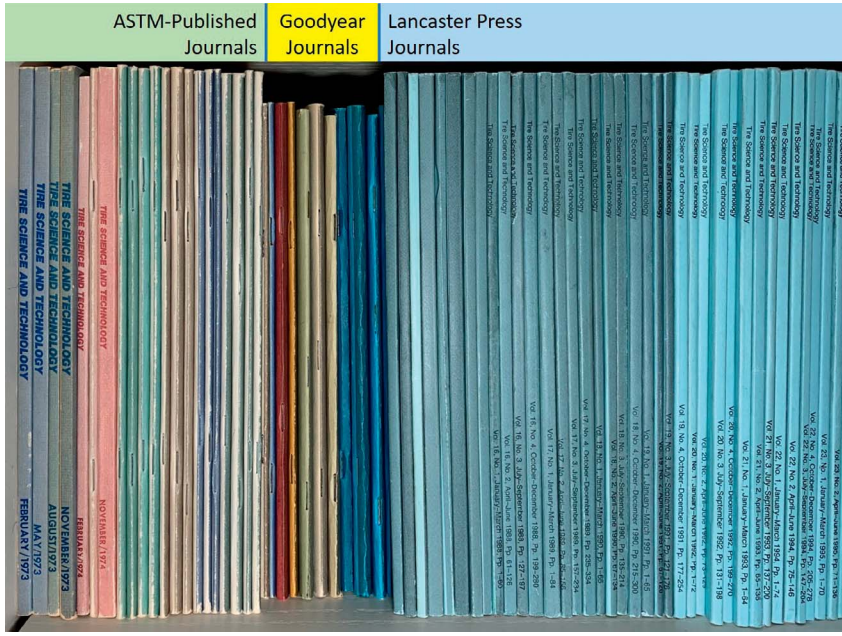


FIG. 4 — *Tire Society journals in order by date.*

The change to using a dedicated publishing company to produce the journal also led to the dissolution of the Publications Committee in 1996, as by then, Lancaster Press had assumed the role of typesetting the articles.

The journal publisher changed to The Tire Society starting with volume 7. The blue and gray theme started with volume 14, and a new logo was added in volume 38. As shown in Figure 6, the next change to the cover—adding the current logo—occurred in October 2018 with volume 46, issue 4. The first major change to the journal cover layout occurred in volume 47, issue 1. This version with the "tire tread" graphic on the spine is the one used today.

8 Journal Editors and the Editorial Process

The editor of the journal has numerous roles. The editor is appointed by the society president and confirmed by the XCOM. He or she appoints and directs the associate editors, assigning manuscripts to them for review and acting as the ultimate review arbiter. The editor determines the schedule of publication for each article and acts as the primary point of contact for all technical matters related to the journal.

FIG. 5 — *Early Tire Society journal covers.*

Originally, article submission and editing involved physically mailing paper copies of each manuscript to reviewers. The current process is completely web based, using the Allen Press Editorial Manager website for manuscript submission, reviews, and the approval process.

As shown in Table 7, the journal has had six editors, beginning with Daniel Livingston during the ASTM F-09 period and the transition to Tire Society publication. Several sources have said that Livingston extensively edited papers,

FIG. 6 — *Recent Tire Society journal covers.*

improving grammar and other organization, but that he and his team found it difficult to maintain a regular publication schedule.

Raouf Ridha expanded the pool of reviewers and focused on maintaining a regular journal schedule. Perhaps the most far-reaching change made by Ridha was to the way that articles were reviewed. In 1997, the title of members of the editorial board was changed from "Editorial Advisers" to "Associate Editors." This change reflected more than just a new name. Ridha decided that each associate editor would be assigned one or two manuscripts each year. The associate would then be responsible for finding reviewers and for reporting back to the editor the choice to publish, publish with revisions, or decline [21]. This change resulted in a significant turnover of the editorial board over the next 2 years, but it proved successful, and the same fundamental methodology continues to this day.

During the same period, Floyd Conant was particularly active in the review process, and he was designated senior associate editor from 1987 until his retirement in 1990, when the society presented him with a special service award.

In 1995, Jozef DeEskinazi took over as journal editor. In 2000, DeEskinazi and Farhad Tabaddor, who had been serving as the society's treasurer, decided to switch positions [22], with Tabaddor continuing as editor from 2000–2007 and DeEskinazi as treasurer from 2000–2004.

Around 2003, the society's editorial board began exploring the idea of creating an electronic archive of journal articles. This led to concerns over journal pricing because electronic versions would make unauthorized copying easier, and this, it was feared, would adversely affect society membership and

TABLE 7 — *Tire Society journal editors.*

Year	Editor		Number of associate editors or editorial advisors[a]
	Name	Company	
1973	Dan Livingston	Goodyear	9
1974			9
1975			13
1976			14
1977			14
1978			15
1979			15[b]
1980			16[c]
1981			16
1982			17[d]
1983	Raouf A. Ridha	Goodyear	18
1984			18
1985			18
1986			17
1987			15[e]
1988			12
1989			14
1990			17
1991			16
1992			15
1993			15
1994			18
1995	Jozef DeEskinazi	Continental	13
1996			12
1997			12
1998			13
1999			13
2000	Farhad Tabaddor	Michelin	14
2001			14
2002			14
2003			14
2004			13
2005			13
2006			13
2007			12
2008	William Mars	Cooper Tire	13
2009			13
2010	Michael Kaliske	T.U. Dresden	12
2011			13
2012			13
2013			13
2014			13
2015			14
2016			15
2017			14
2018			14

TABLE 7 — Continued.

Year	Editor		Number of associate editors or editorial advisors[a]
	Name	Company	
2019			10
2020			10

[a]From 1973 to 1986, these individuals are referred to as editorial advisors.
[b]F. Cecil Brenner was listed as managing editor in 1979–1980. This coincides with the founding of The Tire Society.
[c]Morton Leggett was listed as consulting editor from 1980–1985. Leggett supervised publishing during the time that Goodyear published the journal.
[d]In 1982, Raouf Ridha and Floyd Conant become the first associate editors.
[e]Beginning in 1987, the editorial advisors are called associate editors, with one or more senior associate editor from 1987–1999.

finances. In 2008, this concern led the society to publish for the first time an "institutional membership" rate that was intended to be used by libraries and large organizations to make journal content available to multiple readers. Prior to that time, all memberships had been intended to be individual [23].

In 2004, issues 2 and 4 of the journal each came with an attached CD-ROM containing electronic versions of that volume's articles. The April CD contained articles from issues 1 and 2, and the October issue contained articles from all four of the year's issues.

To support the creation of the web-based archive of journal articles, electronic proposals were solicited from several potential publishers. In 2005, the American Institute of Physics (AIP) was chosen as the new journal publisher.

Through AIP, the society created its first web-based archive of journal articles, making the entire history of the society's journal articles available to its members for the first time. Previously, members had access to the paper journals only for the years that they had been members. This provided a significant new benefit to the membership. Having article text online also enabled searchability of article and bibliographic information, further enhancing the value of that information. The electronic format also allowed authors to submit figures in color for the first time, even though the paper journals continued to be published in black and white.

The change to AIP also brought an electronic forum for paper submission and review. Unfortunately, after approximately 2 years, AIP notified the society that it would stop providing publishing services for other societies, so The Tire Society again needed to find a new publisher.

In 2008, the society selected Allen Press as its journal publisher. That decision may have been made at least partly because Allen Press used the same editorial software as AIP, and this minimized the costs and difficulty of the transition. The association with Allen Press continues to this day, and in 2015,

Allen Press was also chosen to manage The Tire Society's office and to host its website. Allen Press and its AllenTrack system provide a digital framework for submission of journal articles and the editorial review process.

From 2003 to 2009, Farhad Tabaddor and Will Mars supervised the creation of the web-based archive of journal articles and the transition to a digital system for article submission and review. Mars became editor of the journal in 2008 upon Tabaddor's retirement. However, Mars was in the process of establishing his own company during this time. In 2010, Mars nominated current editor Michael Kaliske to succeed him, and Mars then became editor of the journal of *Rubber Chemistry and Technology*, helping that journal negotiate its own transition to an electronic archive. During his tenure as journal editor, Kaliske has spearheaded a multiyear process of obtaining an Impact Factor (rating) for the journal.

8.1 The Editorial Board

The editorial board of the journal has had a total of 60 members to date. Initially, these were called editorial advisers, and several of these may have been present more for name recognition than for actual editorial output.

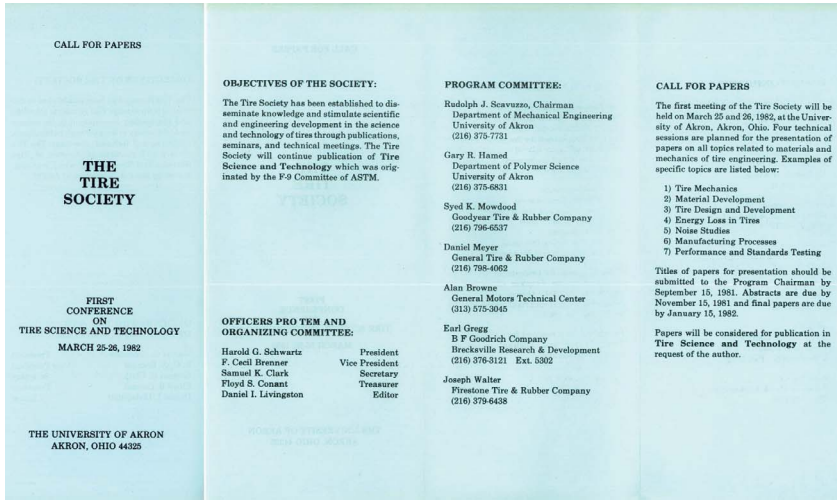
In 1982, Raouf Ridha and Floyd Conant were named the first associate editors, with Ridha becoming editor in 1985 (for the 1983 volume). Conant led the Publications Committee, which handled editing and typesetting. Ridha was in charge of refereeing the articles. In 1986, as explained above, the advisers were renamed associate editors, and Conant became senior associate editor. In 1990, Jozef DeEskinazi joined Conant as a senior associate editor, becoming editor in 1995. At that point, Farhad Tabaddor became senior associate editor, until 2000, when he became editor. Since 2000, the journal has not had a senior associate editor.

Table 8 shows a list of editorial advisers and associate editors sorted by years of service. The average term of service for these individuals is nearly 12 years. Five (Takashi Akasaka, Joe Padovan, Joe Walter, Sam Clark, and Alan Browne) each served more than 30 years. The continued high technical standard achieved by the journal is a result of their work.

9 The First Conference

With the separation from ASTM F-09, it became clear that another source needed to be found for journal articles. Society leadership began exploring the possibility of collaborating with the University of Akron to create an annual conference.

Dan Livingston, Fred Kovac, Harold Schwarz, and Rudy Scavuzzo (chairman of the University of Akron's Department of Mechanical Engineering)



CALL FOR PAPERS

THE
TIRE
SOCIETY

FIRST
CONFERENCE
ON
TIRE SCIENCE AND TECHNOLOGY
MARCH 25-26, 1982

THE UNIVERSITY OF AKRON
AKRON, OHIO 44325

OBJECTIVES OF THE SOCIETY:

The Tire Society has been established to disseminate knowledge and stimulate scientific and engineering development in the science and technology of tires through publications, seminars, and technical meetings. The Tire Society will continue publication of **Tire Science and Technology** which was originated by the F-9 Committee of ASTM.

OFFICERS PRO TEM AND ORGANIZING COMMITTEE:

Harold G. Schwartz	President
F. Cecil Brenner	Vice President
Samuel K. Clark	Secretary
Floyd S. Conant	Treasurer
Daniel I. Livingston	Editor

PROGRAM COMMITTEE:

Rudolph J. Scavuzzo, Chairman
Department of Mechanical Engineering
University of Akron
(216) 375-7731

Gary R. Hamed
Department of Polymer Science
University of Akron
(216) 375-6831

Syed K. Mowdood
Goodyear Tire & Rubber Company
(216) 796-6537

Daniel Meyer
General Tire & Rubber Company
(216) 798-4062

Alan Browne
General Motors Technical Center
(313) 575-3045

Earl Gregg
B F Goodrich Company
Brecksville Research & Development
(216) 376-3121 Ext. 5302

Joseph Walter
Firestone Tire & Rubber Company
(216) 379-6438

CALL FOR PAPERS

The first meeting of the Tire Society will be held on March 25 and 26, 1982, at the University of Akron, Akron, Ohio. Four technical sessions are planned for the presentation of papers on all topics related to materials and mechanics of tire engineering. Examples of specific topics are listed below:

1) Tire Mechanics
2) Material Development
3) Tire Design and Development
4) Energy Loss in Tires
5) Noise Studies
6) Manufacturing Processes
7) Performance and Standards Testing

Titles of papers for presentation should be submitted to the Program Chairman by September 15, 1981. Abstracts are due by November 15, 1981 and final papers are due by January 15, 1982.

Papers will be considered for publication in **Tire Science and Technology** at the request of the author.

FIG. 7 — *1982 Call for Papers.*

laid out a plan for a 2-day conference that would occur at the University of Akron (see Appendix C).

The conference would include a keynote address by an industry leader, an invited lecture (later called the Plenary Lecture) by a recognized industry expert, and a dinner banquet that would feature a celebrity speaker—all features the conference includes today. The first Tire Society conference was held in March 1982, during the University of Akron's spring break. This was when the Shrank South Lecture Hall could be made available. For 15 years, the conference was held at the University of Akron during spring break, and the university provided its facilities to the society at their cost.

Figure 7 shows the call for papers for the 1982 conference, including the objectives of the society, a list of "pro tem" officers, and the Program Coordinating Committee.

Figure 8 shows the program for the first conference. The names on this program are a cross section of tire industry technical leaders of the time.

As shown in Figure 9, the conference was a dramatic success, with more than 300 attendees. During the conference, a business meeting was held, and a slate of officers was elected (unopposed). These included the following:

- President: Harold G. Schwartz, consultant to duPont de Nemours
- Vice President: F. Cecil Brenner, NHTSA
- Secretary: Samuel K. Clark, the University of Michigan

TABLE 8 — *Journal associate editors and editorial advisors (with years of service).*

Name	No. of years
Takashi Akasaka	36
Joseph Padovan	36
Joseph D. Walter	35
Samuel K. Clark	34
Alan L. Browne	33
Hans B. Pacejka	29
Annette Lechtenboehmer	28
Heinrich Rothert	25
Karl A. Grosch	22
John R. Luchini	20
Dieterich J. Schuring	20
Alan N. Gent	19
Tim Rhyne	19
Adolf Schallamach	19
Reinhard Mundl	17
John T. Tielking	17
Michael J. Trinko	15
Earl C. Gregg Jr.	14
David W. Nicholson	14
Michael Kaliske	13
Ronald H. Kennedy	13
Raouf A. Ridha	13
Farhad Tabaddor	13
Walter Bergman	12
H. Keith Brewer	11
Floyd Conant	11
Ric Mousseau	11
Jozef DeEskinazi	10
I. Robert Ehrlich	10
Rolf Gall	10
Daniel Livingston	10
Yukio Nakajima	10
G. Paolo Giuliana	9
Jin-Rae Cho	8
Iqbal S. Rai	8
Axel Becker	7
Maik Brinkmaier	7
Franco Bottasso	6
C.L. Chow	6
Hans Dorfi	6
Will V. Mars	6
Marion Pottinger	6
Jan Terziyski	6
Jim McIntyre	5
Mohammed Sobhanie	5
John Turner	5
Thomas J. Dudek	4
Steve Cron	3

TABLE 8 — Continued.

Name	No. of years
Nien-Tsu Tseng	3
Anudeep Bhoopalam	2
F Cecil Brenner	2
Kejing Li	2
Udo Nackenhorst	2
Nihar Raje	2
Yintao Wei	2
Paolo Bandel	1
V. Eric Gough	1
Gerald R. Potts	1
Roberto Sangalli	1
Anoop Varghese	1

- Treasurer: David A. Benko, Goodyear Tire & Rubber Co.
- Editor: Daniel I. Livingston, Goodyear Tire & Rubber Co.
- Member at Large: Frederick J. Kovac, Goodyear Tire & Rubber Co.
- Member at Large: Howard L. Stephens, the University of Akron

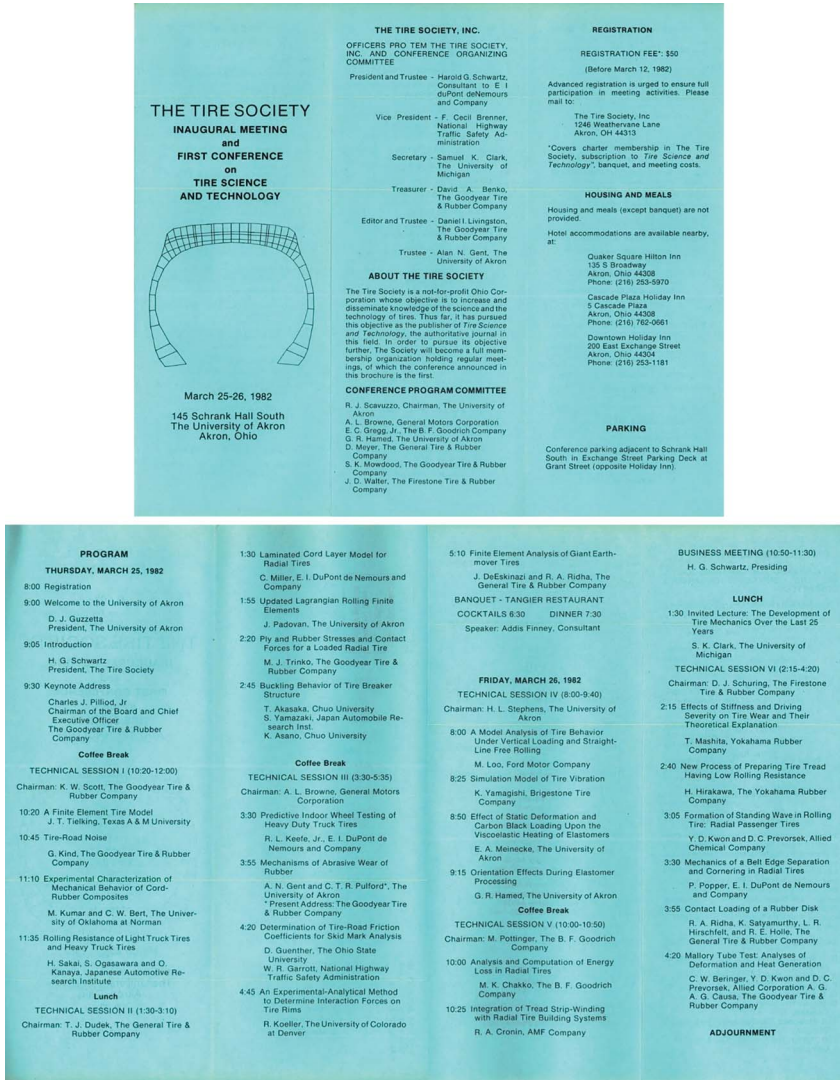
Figure 10 shows the first elected officers of the society (front, left to right: Schwartz, Livingston; rear, left to right: Brenner, Clark, Benko, Kovac; not shown: Stephens).

10 Conference Invited Speakers

From its first year, the conference has included three invited speakers. The conference typically began with a keynote address that was delivered by a tire industry leader. As shown in Table 9, keynote speakers have included chief executive officers of a majority of tier 1 and 2 tire companies. In 1988, and again in 1993, the society published bound collections of these keynote addresses, which remain interesting reading. The records of the society collected by Howard Snyder contain the texts of an additional eight as-yet-unpublished keynote addresses.

At the first conference, Dr. Samuel Clark delivered an "invited lecture." The talk was retitled the "plenary lecture" in 1983. Plenary lecturers have typically been chosen in recognition of their career contribution to tire science and technology or as someone providing a globally relevant technical perspective. As shown in Table 10, the list of plenary lecturers comprises a veritable "who's who" of tire researchers.

Generally, a plenary lecture is delivered at a conference that has multiple simultaneous speaker tracks. The plenary lecture is one that would be attended by all participants. Since The Tire Society conference has always had a single (plenary) technical track, the term *plenary lecture* in this case is slightly inapt,



THE TIRE SOCIETY
INAUGURAL MEETING
and
FIRST CONFERENCE
on
TIRE SCIENCE
AND TECHNOLOGY

March 25-26, 1982

145 Schrank Hall South
The University of Akron
Akron, Ohio

THE TIRE SOCIETY, INC.

OFFICERS PRO TEM THE TIRE SOCIETY, INC. AND CONFERENCE ORGANIZING COMMITTEE

President and Trustee - Harold G. Schwartz, Consultant to E. I. duPont deNemours and Company

Vice President - F. Cecil Brenner, National Highway Traffic Safety Administration

Secretary - Samuel K. Clark, The University of Michigan

Treasurer - David A. Benko, The Goodyear Tire & Rubber Company

Editor and Trustee - Daniel I. Livingston, The Goodyear Tire & Rubber Company

Trustee - Alan N. Gent, The University of Akron

ABOUT THE TIRE SOCIETY

The Tire Society is a not-for-profit Ohio Corporation whose objective is to increase and disseminate knowledge of the science and the technology of tires. Thus far, it has pursued this objective as the publisher of *Tire Science and Technology*, the authoritative journal in this field. In order to pursue its objective further, The Society will become a full membership organization holding regular meetings, of which the conference announced in this brochure is the first.

CONFERENCE PROGRAM COMMITTEE

R. J. Scavuzzo, Chairman, The University of Akron
A. L. Browne, General Motors Corporation
E. C. Gregg, Jr., The B. F. Goodrich Company
G. R. Hamed, The University of Akron
D. Meyer, The General Tire & Rubber Company
S. K. Mowdood, The Goodyear Tire & Rubber Company
J. D. Walter, The Firestone Tire & Rubber Company

REGISTRATION

REGISTRATION FEE*: $50

(Before March 12, 1982)

Advanced registration is urged to ensure full participation in meeting activities. Please mail to:

The Tire Society, Inc
1246 Weathervane Lane
Akron, OH 44313

*Covers charter membership in The Tire Society, subscription to *Tire Science and Technology*, banquet, and meeting costs.

HOUSING AND MEALS

Housing and meals (except banquet) are not provided.

Hotel accommodations are available nearby, at:

Quaker Square Hilton Inn
135 S Broadway
Akron, Ohio 44308
Phone: (216) 253-5970

Cascade Plaza Holiday Inn
5 Cascade Plaza
Akron, Ohio 44308
Phone: (216) 762-0661

Downtown Holiday Inn
200 East Exchange Street
Akron, Ohio 44304
Phone: (216) 253-1181

PARKING

Conference parking adjacent to Schrank Hall South in Exchange Street Parking Deck at Grant Street (opposite Holiday Inn).

PROGRAM

THURSDAY, MARCH 25, 1982

8:00 Registration

9:00 Welcome to the University of Akron
D. J. Guzzetta
President, The University of Akron

9:05 Introduction
H. G. Schwartz
President, The Tire Society

9:30 Keynote Address
Charles J. Pilliod, Jr.
Chairman of the Board and Chief Executive Officer
The Goodyear Tire & Rubber Company

Coffee Break

TECHNICAL SESSION I (10:20-12:00)

Chairman: K. W. Scott, The Goodyear Tire & Rubber Company

10:20 A Finite Element Tire Model
J. T. Tielking, Texas A & M University

10:45 Tire-Road Noise
G. Kind, The Goodyear Tire & Rubber Company

11:10 Experimental Characterization of Mechanical Behavior of Cord-Rubber Composites
M. Kumar and C. W. Bert, The University of Oklahoma at Norman

11:35 Rolling Resistance of Light Truck Tires and Heavy Truck Tires
H. Sakai, S. Ogasawara and O. Kanaya, Japanese Automotive Research Institute

Lunch

TECHNICAL SESSION II (1:30-3:10)

Chairman: T. J. Dudek, The General Tire & Rubber Company

1:30 Laminated Cord Layer Model for Radial Tires
C. Miller, E. I. DuPont de Nemours and Company

1:55 Updated Lagrangian Rolling Finite Elements
J. Padovan, The University of Akron

2:20 Ply and Rubber Stresses and Contact Forces for a Loaded Radial Tire
M. J. Trinko, The Goodyear Tire & Rubber Company

2:45 Buckling Behavior of Tire Breaker Structure
T. Akasaka, Chuo University
S. Yamazaki, Japan Automobile Research Inst.
K. Asano, Chuo University

Coffee Break

TECHNICAL SESSION III (3:30-5:35)

Chairman: A. L. Browne, General Motors Corporation

3:30 Predictive Indoor Wheel Testing of Heavy Duty Truck Tires
R. L. Keefe, Jr., E. I. DuPont de Nemours and Company

3:55 Mechanisms of Abrasive Wear of Rubber
A. N. Gent and C. T. R. Pulford*, The University of Akron
* Present Address: The Goodyear Tire & Rubber Company

4:20 Determination of Tire-Road Friction Coefficients for Skid Mark Analysis
D. Guenther, The Ohio State University
W. R. Garrott, National Highway Traffic Safety Administration

4:45 An Experimental-Analytical Method to Determine Interaction Forces on Tire Rims
R. Koeller, The University of Colorado at Denver

5:10 Finite Element Analysis of Giant Earth-mover Tires
J. DeEskinazi and R. A. Ridha, The General Tire & Rubber Company

BANQUET - TANGIER RESTAURANT

COCKTAILS 6:30 DINNER 7:30

Speaker: Addis Finney, Consultant

FRIDAY, MARCH 26, 1982

TECHNICAL SESSION IV (8:00-9:40)

Chairman: H. L. Stephens, The University of Akron

8:00 A Model Analysis of Tire Behavior Under Vertical Loading and Straight-Line Free Rolling
M. Loo, Ford Motor Company

8:25 Simulation Model of Tire Vibration
K. Yamagishi, Brigestone Tire Company

8:50 Effect of Static Deformation and Carbon Black Loading Upon the Viscoelastic Heating of Elastomers
E. A. Meinecke, The University of Akron

9:15 Orientation Effects During Elastomer Processing
G. R. Hamed, The University of Akron

Coffee Break

TECHNICAL SESSION V (10:00-10:50)

Chairman: M. Pottinger, The B. F. Goodrich Company

10:00 Analysis and Computation of Energy Loss in Radial Tires
M. K. Chakko, The B. F. Goodrich Company

10:25 Integration of Tread Strip-Winding with Radial Tire Building Systems
R. A. Cronin, AMF Company

BUSINESS MEETING (10:50-11:30)
H. G. Schwartz, Presiding

LUNCH

1:30 Invited Lecture: The Development of Tire Mechanics Over the Last 25 Years
S. K. Clark, The University of Michigan

TECHNICAL SESSION VI (2:15-4:20)

Chairman: D. J. Schuring, The Firestone Tire & Rubber Company

2:15 Effects of Stiffness and Driving Severity on Tire Wear and Their Theoretical Explanation
T. Mashita, Yokahama Rubber Company

2:40 New Process of Preparing Tire Tread Having Low Rolling Resistance
H. Hirakawa, The Yokahama Rubber Company

3:05 Formation of Standing Wave in Rolling Tire: Radial Passenger Tires
Y. D. Kwon and D. C. Prevorsek, Allied Chemical Company

3:30 Mechanics of a Belt Edge Separation and Cornering in Radial Tires
P. Popper, E. I. DuPont de Nemours and Company

3:55 Contact Loading of a Rubber Disk
R. A. Ridha, K. Satyamurthy, L. R. Hirschfelt, and R. E. Holle, The General Tire & Rubber Company

4:20 Mallory Tube Test: Analyses of Deformation and Heat Generation
C. W. Beringer, Y. D. Kwon and D. C. Prevorsek, Allied Corporation
A. G. Causa, The Goodyear Tire & Rubber Company

ADJOURNMENT

FIG. 8 — *1982 conference program.*

but the content and perspective of the plenary lectures has always been broadly useful.

The plenary lecture acts as a technical counterpoint to the keynote address, which traditionally focuses on business-related themes. It is typically held in the middle of the conference, and as John Luchini told the author, “we created the

FIG. 9 — *1982 conference attendees.*

plenary lecture to give people a reason to come back for the second day of the conference."

From its first year, the conference has included a lunch or dinner banquet. The banquet provides opportunities for social interaction and has become the place where awards for superior papers are presented. From the first year, the banquets have included an invited speaker. As can be seen in Table 11, banquet speakers have typically discussed topics related to transportation but typically at an anecdotal, rather than a technical, level.

During the years when the conference was held at the University of Akron, the banquets were typically held at the Tangier restaurant. Local arrangements were handled for several years by Judith Isroff, who also founded Keep Akron Beautiful and was active in many Akron-area charitable foundations [24].

Beginning in 1998, the banquets were typically held at the conference venue. In 1999, the conference included both lunch speakers and a dinner speaker, covering different topics. In 2016, a banquet was not held, but subsequent polling of conference attendees led to its inclusion in subsequent years.

FIG. 10 — *The first elected Tire Society officers (front, left to right: Schwartz, Livingston; rear, left to right: Brenner, Clark, Benko, Kovac; not shown: Stephens).*

11 Evolution of the Society and Conference

During the TACT and ASTM F-09 era, meetings and symposia were held twice a year at changing locations. Tire Society conferences have been annual, and until 2020, all have been held in the Akron, Ohio, area.

From 1982 until 1997, the conferences were held in the University of Akron's Shrank Hall South auditorium during the university's spring break, because that was when the auditorium could be made available for several days. During that period, the university provided its facilities to the society at no charge. Effectively, this anchored the conference in the third or fourth week of March each year.

Although the ASTM symposia were a half-day or less, each Tire Society conference generally lasted 2 full days and had four to six technical sessions on a range of topics. Thus, an ASTM symposium might be considered equivalent to one Tire Society conference session.

Although the basic conference format established in 1982 has worked well, various experiments have been tried. In 1986, the conference was expanded to 2½ days, but it returned to the 2-day format the next year.

TABLE 9 — *Conference keynote speakers.*

Year	Name	Company	Title
1982	Charles J. Pilliod Jr.[a,b]	Goodyear	Chairman and CEO
1983	Kanichiro Ishibashi[a,b]	Bridgestone	Chairman
1984	Francois Michelin[a,b]	Michelin	Chairman and CEO
1985	Leopoldo Pirelli[a,b]	Pirelli	Chairman
1986	Harry A. McCreary[a,b]	McCreary Tire	Chairman
1987	Sheldon R. Salzman[a,b]	Uniroyal/Goodrich	Vice chairman and COO
1988	None		
1989	T. H. Barrett[b]	Goodyear	President and CEO
1990	Wilhelm Borgmann[b]	General Tire	President and CEO
1991	William V. Muse[b]	University of Akron	President
1992	Stanley C. Gault[b]	Goodyear	Chairman and CEO
1993	Ivan W. Gorr[c]	Cooper	Chairman and CEO
1994	Lee N. Fiedler[c]	Kelly-Springfield	President and CEO
1995	Francois Michelin[c]	Michelin	Managing partner
1996	Hubertus von Grunberg	Continental	Chairman
1997	Lucio Pinto	Pirelli	Vice chairman
1998	Yoichiro Kaizaki[c]	Bridgestone	Chairman
1999	Y. R. Cho[c]	Hankook	Chairman
2000	Pat Rooney	Cooper	CEO and chairman
2001	Hyung In Shin[c]	Kumho	President and CEO
2002	Samir G. Gibara[c]	Goodyear	Chairman and CEO
2003	Manfred Wennemer	Continental	Chairman
2004	Tom Dattilo[c]	Cooper	Chairman, president, CEO
2005	Terry Gettys	Michelin Americas	President
2006	Francesco Gori	Pirelli	Chairman/managing director
2007	Tadanohu Nagumo	Yokohama	President
2008	Mark Emkes	BS/FS NA	CEO
2009	Robert Keegan	Goodyear	Chairman and CEO
2010	Seung Hwa Suh	Hankook	Vice chairman and CEO
2011	Terry Connolly	General Motors	Director of tire and wheel systems
2012	Enki Tan	GITI	Executive chairman
2013	Chuck Yurkovich	Cooper	Vice president global R&D
2014	Michael Hochschwender	Smithers Group	CEO
2015	T. J. Higgins	Bridgestone Americas	President consumer tire ops.
2016	Richard Kellam	Goodyear	Senior VP global sales and marketing
2017	Juan Botero	Continental	VP sales OE pass. and LT tires
2018	Jim Popio	Smithers Rapra	VP operations
2019	Robert Asper	Bridgestone (BATO)	Director core system engineering
2020	Chris Helsel	Goodyear	Senior VP and CTO

[a]Text of address published in 1988.
[b]Text of address published in 1993.
[c]Society archives include text of address.

In 1998, a decision was made to change the date of the conference from mid-March to the end of April. This was done to move the conference away from the fiscal reporting period at the end of each year's first quarter, in the hope that this would make it easier to obtain corporate executives as keynote

TABLE 10 — *Conference plenary lecturers.*

Year	Name	Company	Title of lecture
1982	Samuel. K. Clark	University of Michigan	The Development of Tire Mechanics over the Last 25 Years
1983	R. A. Shapery	Texas A&M University	Some Basic Mechanisms of Crack Growth in Tires
1984	A. G. Thomas	Malaysian Rubber Producers Research Association	Strength of Rubbers
1985	Karl. A. Grosh	Continental	Physical Properties of Tire Compounds and Their Influence on Tire Performance
1986	F. Bohm	University of Berlin	Theory of High-Frequency Rolling Phenomena of Belted Tires
1987	A. Roger Williams	SP Tyres UK	Review of Tire Wear and Traction Relative to the Road Surface
1988	Dieter J. Schuring	Firestone	Overview of Tire Rolling Loss
1989	Takashi Akasaka	Chuo University	Progress in Tire Structural Mechanics
1990	Allen N. Gent	University of Akron	Internal Failure Mechanisms in Rubber Composites
1991	Hans B. Pacejka	Delft University	Tires and Vehicle Dynamics
1992	Nicholas Trivisonno	Uniroyal/Goodrich (retired)	Review of Tire Thermography Concepts
1993	Hans B. Pacejka	Delft University	Trends in Tire Modeling for Vehicle Dynamics Studies
1994	Joseph Padovan	University of Akron	Millipolar Theory for Twisted Cord-Reinforced Composites
1995	Allen Veith	Technical Development Associates	Tire Traction: How and Why Performance Varies
1996	K. Yamagishi	Bridgestone	A Study of Tire Contour from Passenger Car Tire to Aircraft Tire
1997	Marion G. Pottinger	Smithers Scientific Services	The Tire, Force Generator or Transducer
1998	Joe D. Walter	Bridgestone/Firestone	The Role of Experimental Mechanics in Tire Technology
1999	Werner Soedel	Purdue University	Thoughts on the Use of Modal Synthesis for the Analysis of Tire Vibrations
2000	Nissim Calderon	Goodyear VP Research (retired)	A Changing Tire Business Model
2001	Donald B. Shae	RMA president and CEO	T.R.E.A.D. Act
2002	Jean-Pierre Couratier	Michelin	The Benefits of Radial Tires to Air Transportation: The Example of Concorde
2003	W. Riley Garrott	NHTSA	Vehicle Dynamics—Tires and Safety
2004	Robert Bernhard	Purdue University	Is it the Pavement or the Tire That Makes All of the !*$#& Environmental Noise
2005	Joop Nagtegaal	ABAQUS	An Overview of Analysis Methods for Rolling Tires
2006	Thomas Gillespie	University of Michigan	A Brief History of Vehicle Dynamics: Why Tires Are So Important
2007	Bruce Engelmann	Dassault/Simulia	A Look at Trends in Tire Design Simulation
2008	Tim Rhyne	Michelin	Membrane Theory—Tire Design 101 and a Valuable Research Tool
2009	Marvin Janssen	Hankook (retired)	Advances and Changes in Tire Science and Technology

TABLE 10 — Continued.

Year	Name	Company	Title of lecture
2010	Yukio Nakajima	Kogakuin University	Application of Computational Mechanics to Tire Design—Yesterday, Today, and Tomorrow
2011	Steve Karamihas	University of Michigan TRC	The State of Research on Smooth, Safe, and Quiet Pavements in the U.S.
2012	Michael Kaliske	Technische Universitat Dresden	Computational Engineering in Rubber Modeling and Tire Design
2013	Bill Langer	MTS Systems	History of Flat Belt Technology at MTS
2014	Tod Laursen	Khalifa University of Science	Recent Computational Advances in Contact and Friction Simulation as Applied to Tire Mechanics
2015	Bo N. J. Persson	Multiscale Consulting	Rubber Friction and Tire Dynamics
2016	Fredrik Gustafsson	Linkoping University	Sensor Fusion Techniques for Monitoring Tire and Road Surface Condition
2017	Ron Kennedy	CenTiRe	Tire Finite Element Modeling—How We Got Where We Are and Where Are We Headed
2018	Gene Petersen	Consumer Reports	An Update Review of Consumer Reports Tire Testing. Testing Evolves to Stay in Touch with the Consumer
2019	Srikanth Saripalli	Texas A&M Center for Autonomous Vehicles	Autonomous Vehicles: The Good, the Bad, and the Ugly
2020	Giorgio Rizzoni	OSU and Ford Motor Company	

TABLE 11 — *Conference banquet speakers.*

Year	Name	Company	Title of talk
1982	Addis Finney	Firestone (retired)	
1983	R. H. Snyder	Uniroyal	
1984	Stuart Marshall	MTD European tire journalist	
1985	Jackie Stewart	Formula One world champion	
1986	Gerry Faust	University of Akron football coach	
1987	Keith Crain	Crain Publications	
1988	David Clemm	Gordon Black Corp (polling)	
1989	Chris Economaki	Racing commentator	
1990	Roger Penske	Penske Group	
1991	Edwin J. C. Sobey	National Invention Center, executive director	
1992	Frederick D. Gregory	NASA astronaut, shuttle command	
1993	J. C. Tinianow	Sierra Club	
1994	Stephan J. Girsky	Paine-Webber auto and tire analyst	
1995	Pete McDonald	Tire forensic specialist	
1996	Leo Mehl	Goodyear director of racing	Race Tires—The Secret Winners
1997	Mike Young	U.S. Secret Service	The U.S. Secret Service and Its High Tech Challenges
1998	Robert Chapman	Allied Signal	Hubble Space Telescope
Lunch 1999	Steve Love/David Giffels	*Akron Beacon Journal*	Wheels of Fortune
Dinner	Edward Haug	NADS	Foundations or Vehicle Virtual Proving Ground Simulation
2000	David Davenport	Davenport/Mammoet LLC	Where the Rubber Meets the Road (Moving Large Things)
2001	Peter Pesch	Antarctica Expedition	Antarctica Expedition
2002	Tom Reese	Continental Tire VP (retired)	Race across America
2003	Gary Koopman	Penn State	Acoustical Analysis of the Liberty Bell
2004	Dave McLellan	General Motors	Corvette
2005	David Widauf	Utah State University	The Utah State Wright Flyer Project
2006	Neal Lackritz	Bose	Bose Suspension Project
2007	Jim Maloney	Goodyear	Airship Operations
2008	Scott R. Graham	NASA Glenn	NASA's New Rockets: An Overview of the Constellation Program and the Areas Launch Vehicles

TABLE 11 — Continued.

Year	Name	Company	Title of talk
2009	Terry Woychowski	GM Chevy Volt	The GM Chevy Volt: Extended Range Electric Vehicle
2010	David Cole	Center for Automotive Research	Today's Turbulence: A Foundation for Future Automotive Success
2011	Donald Palac	NASA Glenn	Future Space Exploration Technology Challenges
2012	John Goosen	VP Westinghouse R&T	Nuclear Energy, Today and Future Opportunities, Technology Options, Issues and Potential Solutions
2013	Tim Joseph	Canadian Institute of Mining	Meeting Tire Challenges in the Oil Sands Surface Mining Industry
2014	Bela Sandor	University of Wisconsin	Chariots of Tut and Moses
2015	Kathleen Schubert	NASA Glenn	NASA's Journey to Mars
2016	None		
2017	John Moloney	Penske GM	Racing toward Perfection (R2P) 50+ Years of Winning at Team Penske
2018	Santo Padula II	NASA Glenn	Shape Memory Alloy (SMA) Tires. A New Paradigm in Tires
2019	Pierre Lefevre	Coast Autonomous CTO	Time versus Space in Urban Mobility

speakers. The change of date also required a change of venue because the university could not provide a suitable meeting space while classes were in session, so the conference was moved to a downtown Akron hotel. Until 1998, conference programs contained the words "Under the Auspices of The University of Akron Department of Mechanical Engineering"; 1998 was the last year that these words appeared.

As a result of the move, the society's costs to hold the conference increased dramatically, and so conference registration fees were also increased. This resulted in declining attendance.

From 1998 until 2001, the conferences were held in downtown Akron during the last week of April. In 2001, the conference date was moved from April to September in an attempt to collaborate and synergize with the International Tire Exposition and Conference (ITEC) show (see Appendix C). Table 12 shows a list of conference dates and other information about the conference.

11.1 Transition to Electronic Presentations

In the early days of the conference, presentation materials were shown using photographic slides or an overhead or opaque projector. The transition to electronic media did not happen until the late 1990s. A survey of society members in 1996 found that only 46% of them used the World Wide Web [25].

The change occurred coincident with the move away from the University of Akron. The author believes that the paper that he and Marion Pottinger delivered in 1998 (for which they won the Superior Paper award) was the first to be presented using (his employer's) laptop and a computer projector supplied by Goodyear [25]. The following is from Tire Society XCOM minutes in 1999:

> ***Audiovisual Facilities***
> It is now planned that audiovisual is to be done the same as in 1998 using a contractor and a Goodyear supplied computer projector. However, if we can get all audiovisual at a reasonable price, it will be contracted as a unit purchase so we do not have to borrow the projector.
> ***Presentation Materials***
> We will push MS PowerPoint / Lotus FreeLance type presentations

Once the transition to electronic media began, it moved swiftly. At the 2003 conference, Joe Padovan delivered the last presentation to use an overhead projector.

For several years, those presenting electronically generally supplied their own computers. This resulted in some difficulties with changeovers between speakers, so around 2001–2002, the society began asking authors to upload their presentations to a set of common laptops that this author furnished for that purpose. Around 2013, the society purchased its own laptops for this purpose. Prior to 2020, two laptops were used to allow seamless switching between the

TABLE 12 — *Conference dates and information.*

Year	No.	Dates	Location	Attendees	Fee	Fee coverage
1982	1	Mar 25–26	University of Akron	300+	$50	Membership, print journal, conference
1983	2	Mar 23–24	University of Akron		$50	Membership, print journal, conference
1984	3	Mar 28–29	University of Akron		$50	Membership, print journal, conference
1985	4	Mar 26–27	University of Akron	348	$50	Membership, print journal, conference
1986	5	Mar 25–27	University of Akron	308	$60	Membership, print journal, conference
1987	6	Mar 24–25	University of Akron	334	$60	Membership, print journal, conference
1988	7	Mar 22–23	University of Akron	302		
1989	8	Mar 21–22	University of Akron	354		
1990	9	Mar 21–22	University of Akron	346	$75	Membership, print journal, conference
1991	10	Mar 19–20	University of Akron	281		
1992	11	Mar 24–25	University of Akron	295	$80	
1993	12	Mar 23–24	University of Akron	239		
1994	13	Mar 22–23	University of Akron	257	$120	
1995	14	Mar 21–22	University of Akron	279		
1996	15	Mar 19–20	University of Akron	287	$120 individual $15 student	Membership, print journal, conference
1997	16	Mar 18–19	University of Akron	261	$120 individual $15 student	Membership, print journal, conference
1998	17	Apr 28–29	Ramada Plaza, Akron	297	$120 individual $60 retiree $15 student	Membership, print journal, conference
1999	18	Apr 27–28	Radisson City Center, Akron	286	$120 individual $60 retiree $15 student	Membership, print journal, conference
2000	19	Apr 25–26	Radisson City Center, Akron	224	$120 individual $60 retiree $15 student	Membership, print journal, conference

TABLE 12 — Continued.

Year	No.	Dates	Location	Attendees	Fee	Fee coverage
2001	20	Apr 24–25	Radisson City Center, Akron	179	$120 individual $60 retiree $15 student	Membership, print journal, conference
2002	21	Sep 9–10	Radisson City Center, Akron	226	$200 individual $100 retiree $25 student	Membership, print journal, conference
2003	22	Sep 23–24	Crowne Plaza Quaker Square	170	$200 individual $100 retiree $25 student	Membership, print journal, conference
2004	23	Sep 20–21	Crowne Plaza Quaker Square	209	$200 individual $100 retiree $50 student	Membership, print journal, conference
2005	24	Sep 20–21	Radisson City Center, Akron	216	$200 individual $100 retiree $50 student	membership, print journal, conference
2006	25	Sep 11–12	Radisson City Center, Akron	191	$250 individual $100 retiree $50 student	membership, print journal, conference
2007	26	Sep 25–26	Radisson City Center, Akron	192	$250 individual $100 retiree $50 student	Membership, hard-copy and online journal, conference
2008	27	Sep 15–16	John S. Knight Center, Akron	148	$250 individual $100 retiree $50 student $375 institution $175 subscriber only	Membership, hard-copy and online journal, conference

TABLE 12 — Continued.

Year	No.	Dates	Location	Attendees	Fee	Fee coverage
2009	28	Sep 15–16	Akron City Center		$250 individual $100 retiree $50 student $375 institution $175 subscriber only	Membership, hard-copy and online journal, conference
2010	29	Sep 20–21	DoubleTree, Fairlawn	167	$250 individual $100 retiree $50 student $375 institution $175 subscriber only	Membership, hard-copy and online journal, conference
2011	30	Sep 13–14	Hilton Akron/Fairlawn	174	$100 + 200 individual $25 + 100 retiree $15 + 50 student $0 + 125 + 250 nonmember $450 institution	Membership + conference + $75 print journal
2012	31	Sep 18–19	I-X Center, Cleveland	178	$100 + 200 Individual $25 + 100 retiree $15 + 50 student $0 + 125 + 250 nonmember $525 institution	Membership + conference + $75 print journal +$100 on-site registration
2013	32	Sep 10–11	Hilton Akron-Fairlawn		$100 + 200 individual $25 + 100 retiree $15 + 50 student $0 + 125 + 250 nonmember $525 institution	Membership + conference + $75 print journal +$100 on-site registration

TABLE 12 — Continued.

Year	No.	Dates	Location	Attendees	Fee	Fee coverage
2014	33	Sep 8–10	Greystone Hall, Akron		$100 + 250 individual $25 + 100 retiree $15 + 50 student $0 + 125 + 250 nonmember $600 institution	Membership + conference + $75 print journal +$100 on-site registration
2015	34	Sep 9–10	Hilton Akron/Fairlawn		$125 + 450 individual $35 + 100 retiree $20 student $0 + 125 + 600 nonmember	Membership + conference + $75 print journal
2016	35	Sep 13–14	Hilton Akron/Fairlawn		$125 + 450 individual $35 + 100 retiree $20 student $0 + 125 + 575 nonmember	Membership + conference + $75 print journal +$50 late registration
2017	36	Sep 12–13	Hilton Akron/Fairlawn	127	$125 + 375 individual $35 + 100 retiree $20 student $0 + 125 + 675 nonmember	Membership + conference + $75 print journal +$40 dinner banquet
2018	37	Sep 12–13	Hilton Akron/Fairlawn	116	$125 + 415 individual $35 + 140 retiree $20 + 115 student $0 + 125 + 540 nonmember	Membership + conference + $75 print journal +$25 late registration
2019	38	Sep 10–11	Hilton Akron/Fairlawn	201 (28 comped for sponsors)	$130 + 440 individual $35 + 165 retiree $20 + 140 student	Membership + conference + $75 print journal +$60 late registration
2020	39	Sep 28–Oct 2	Online		$130 + 120 individual $35 + 40 retiree $20 + 40 student	Membership + conference + $75 print journal +$60 late registration

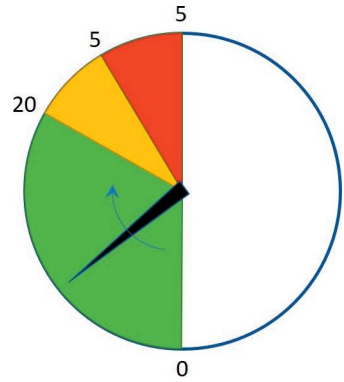


FIG. 11 — *Format of the original clock.*

author presentations and a background graphic showing the conference schedule.

11.2 The Clock

Keeping the conference on schedule is a continuing challenge. At the first conference, authors were given 20 minutes to present their material, followed by 5 minutes for questions and answers and finally 5 minutes for transition to the next author. This timing was maintained until 2019, when presentation time was reduced from 20 to 15 minutes, with other times the same.

The first record of a formal method of timing presentations is a letter from 1995, in which Michael Trinko, then Treasurer of the society, requested that the American Chemical Society (ACS) Rubber Division lend him the timing system lights that they used for presenters at their conferences. The letter is labeled "ok-pick up Monday 3/13/95," so it is presumed that this device was used during the 1995 Tire Society conference [26].

For many years, the time for each presenter was kept using an analog clock with its hour hand removed and with its face covered with colored paper, as shown schematically in Figure 11.

Around 2004, former society President John Luchini decided that the society needed a better method of timing the presentations, so he wrote a Visual Basic program to display a digital clock, as shown in Figure 12. This program has been used at all conferences since that time. The time settings are configurable, and the background color changes from green, to yellow, to orange, then red, and finally to flashing red and black. Unfortunately, with John's untimely passing in 2013, the source code for this program appears to have been lost, and only the executable remains.

Even with the clock displayed on a large monitor in front of each speaker, keeping speakers within their allotted time has sometimes proven challenging,

FIG. 12 — *The new clock.*

and it ultimately remains the job of session chair and program chair to keep the conference on schedule.

11.3 ITEC Collaboration

Around 2001, the society began talks with Crain Communications, the parent organization of the ITEC, which was being held at the John S. Knight Center in downtown Akron in September of even-numbered years. To make it easier for the two conferences to collaborate, The Tire Society conference date was moved to early September to overlap with ITEC.

During the period of ITEC cooperation, various things were tried, including discounts for dual registration and media trades. However, the expected synergies between the for-profit ITEC and not-for-profit Tire Society conference never truly bore fruit for the society in any financially meaningful way.

In 2006, The Tire Society conference was held during the same week as ITEC but at the Radisson hotel, which was a several blocks' uphill walk to the Knight Center.

In 2008, The Tire Society conference was held in a meeting room at the Knight Center during ITEC. Lunches and other activities were shared between the two conferences. Both ITEC and Tire Society registration were handled by the ITEC staff. While there was a small increase in attendance, it was offset by increases in costs and a less-than-ideal conference venue.

In 2009, the conference was relocated to a hotel in Fairlawn, a suburban community 6 miles northwest of the Akron city center. With the exception of 2012 and 2014, the conference remained in Fairlawn through 2019.

In 2010, ITEC moved its conference to the Cleveland International Exhibition Center (I-X-Center), about 40 miles from Akron, and in 2012, The

Tire Society conference moved with it. The two conferences shared keynote addresses. The Tire Society keynote was delivered by Enki Tan of GiTi Tire and the ITEC keynote by David Rohweder of Ford Motor Company.

Again, the joint conference with ITEC did not generate the increased interest or revenue that had been hoped for, and costs for food, beverage, and audio/visual services were higher than they had been at the hotels.

A side effect of the collaboration with Crain and ITEC may have been a souring of the relationship with the American Chemical Society Rubber Division, which was at the time managing The Tire Society office, but that will be discussed later.

The final collaboration with ITEC to date occurred in 2014. That year's conference was held at Greystone Hall, just across Mill Street from the John S. Knight Center, where the ITEC was concurrently being held. The 2014 Tire Society conference was 3 full days, and as such was the longest conference so far. Although the venue was beautiful (a restored 100-year-old Masonic Temple), the logistics of the conference proved to be challenging. At the time, both the Knight Center and Greystone Hall were being run by the Akron Convention and Visitors Bureau, and The Tire Society received a bill for unexpected additional costs of approximately $25,000.

From 2015 to 2019, the conference returned to the Hilton Akron-Fairlawn, where it had also been held in 2011 and 2013. The Hilton has been a stable venue for the conference, and it is well-suited to the society's current needs. Its cost of service is relatively high (though not significantly higher than similar venues near Akron). It is interesting to speculate on what the conference will look like moving forward.

. . . and then COVID-19 happened.

11.4 Membership and Conference Pricing

From its beginnings, The Tire Society has tried to keep attendees' costs low. Although conference registration fees have risen more swiftly than the U.S. Consumer Price Index, they are still significantly below those of most similar technical conferences.

Originally, annual membership in the society and conference registration were combined into a single price. In 2010, the XCOM formed a Fee Structure Committee to investigate and benchmark conference and membership fees from similar organizations. That committee recommended separating the fee for society membership from the fee for conference registration. Starting in 2011, it became possible to pay for society membership without paying to register for the conference. From that time until 2018, it was also possible to register for the conference as a nonmember. Beginning in 2019, it was still possible for an individual to pay for membership without registering for the conference, but the nonmember conference registration option was removed, so all conference registrants were required to also pay for membership in the society.

FIG. 13 — *Conference fees by year.*

Table 12 shows prices by year, and Figure 13 graphs an attendee's annual cost for conference registration over time (plus the society membership fee after 2011).

11.5 Declining Attendance and New Directions

Even with the costs of The Tire Society conference lower than similar conferences, the trend in conference attendance has been a true concern. The reason is shown in Figure 14. Multiple reasons have been postulated for this trend, but the simple fact is that conference attendance has been declining for many years.

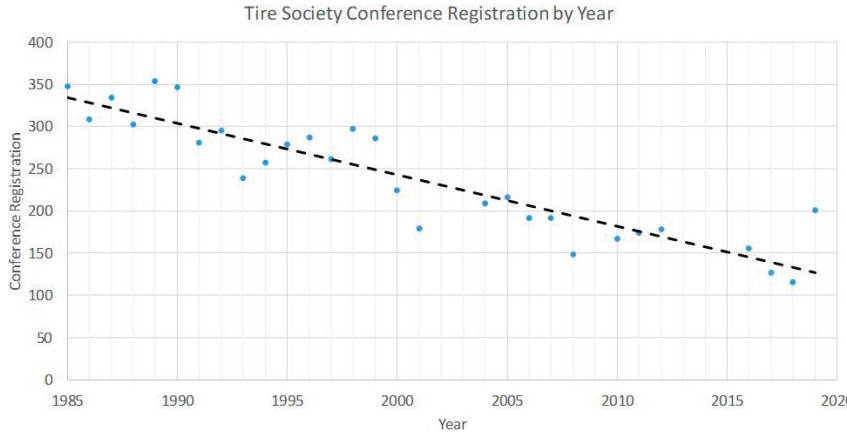


FIG. 14 — *Conference registration by year.*

In 2018, a desire to reverse this trend led to the founding of standing Conference and Marketing Committees and targeted efforts to stimulate new interest in the conference. Marketing actively used social media, paid advertisements, and media partnerships to publicize the conference. The conference committee began meeting monthly to get more people involved in conference planning and to look beyond what can be done in the current year.

Two new ideas were brought to the conference in 2018. A panel discussion was added, and a decision was made to give each conference a theme. The 2019 theme was "Mobility Frontiers," and the 2020 theme is "Intelligent Transportation." The theme for the 2021 conference will be announced at the 2020 business meeting.

A dramatic increase in both attendance and sponsorship occurred in 2019, the largest percentage increase in conference history. It would have been interesting to see whether this trend would have continued in 2020. Instead, given the dramatic changing in world events, the 2020 conference may provide new and different lessons.

11.6 Coronavirus and the Virtual Conference

At the time of writing this article, planning for the 2020 and 2021 conferences are well underway. Early in 2020, the public health emergency made it impossible to safely conduct an in-person conference in Akron in 2020. Given the choice of canceling the conference or of exploring the possibility of conducting a virtual conference, the XCOM and the Conference Committee decided to hold to the conference virtually. This represented a sea change for the society.

Travel to Akron for the conference represents time and expense for those who do not live nearby. The problem is especially acute for companies in Europe and Asia, sometimes also involving difficulties in obtaining travel visas. As a result, the ability of the conference to attract individuals outside of the United States has been limited. Figure 15 shows a breakdown of 2019 conference attendees by mailing address. It can be seen that more than 85% of attendees came from the United States, with more than 50% coming from Ohio [27].

Recognizing this, the XCOM began considering the possibility of allowing remote participation at the conference around 2012 [28]. For various reasons, including costs, technological limitations, and concerns over control of attendance and recording/rebroadcast of presentations, the decision to allow remote participation was always negative.

In 2016, a budget to purchase equipment necessary for recording/rebroadcast of the presentations was submitted to the XCOM, but it was not approved. It is believed that Srikanth Saripalli did conduct a pilot experiment on recording a few presentations, using his own camera.

In 2018, an official experiment was carried out, in which two of the conference presentations were simulcast to a single remote recipient. This

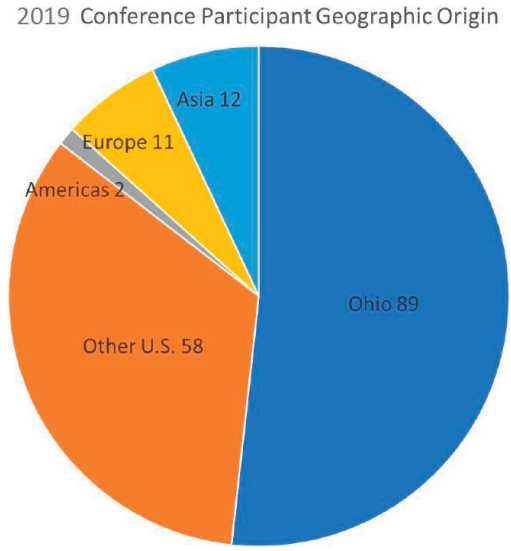


FIG. 15 — *2019 conference attendees by geographic origin.*

proved that the basic concept was feasible, but again, the XCOM decided against proceeding further.

The 2020 conference represents a grand experiment. In 2019, approximately 60% of registration fees went toward food, beverages, and other services related to holding a physical conference [29]. Elimination of these and other related services allowed reduction in the base conference registration fee from $440 to $120. It is hoped that this, along with elimination of the need to travel, will increase participation, especially by attendees from Europe and Asia. Whether that occurs remains to be seen.

The 2020 conference is being presented serially, as if the papers were being delivered live. But to minimize the chance of technical difficulties, the presentations will be prerecorded. Timing of the conference was changed from 2 days to 5 days, with the conference running from 8 a.m. to approximately 11 a.m. each day. This was done as a compromise time to allow viewing in the United States, Europe, or Asia. The presentations will also be available for replaying on demand for a week after the initial presentation.

It will be interesting to see how these changes—forced by public health concerns—will change the direction of the society.

12 The Executive Committee (XCOM)

Per The Tire Society Constitution [30], the officers of the society are its president, vice president, secretary, and treasurer. In addition, the constitution

provides for an Executive Committee (XCOM), consisting of the officers, the past-president, the journal editor, and three or more members at large.

Tables 13 and 14 present a compilation of Tire Society officers and XCOM members at large. These tables were compiled from journals, abstract books, and trifolds advertising the early conferences.

The XCOM is the primary governing board of the society. It is constitutionally required to meet at least once a year, but in practice it typically meets monthly. Originally, XCOM meetings were face to face, which made it difficult for those not living and working in the Akron, Ohio, area to take an active part. However, since around 2010, meeting attendance by teleconference has occurred, and face-to-face meetings of the XCOM are now effectively limited to during the conference. This means that it is now possible for people outside of Akron to take a more active role. The current XCOM includes members from Germany, Minnesota, Michigan, and California.

The officers and XCOM are elected to 2-year terms. These terms commence at the end of the conference in even-numbered years. The editor is appointed by the president with the approval of the XCOM.

All members of the XCOM are volunteers, serving at the pleasure of their employers. Historically, most of the XCOM have been tire company scientists or scientific managers, rather than business-oriented managers. These members also typically represent competing interests. A result of this is that XCOM discussions tend to be very detail-oriented, sometimes making it difficult to effectively plan in a strategic sense.

13 The Awards Committee

Since at least 1987, The Tire Society has awarded one or (in the case of a tie) two Superior Paper awards each year and one to four Honorable Mention Awards. Table 15 shows the names of known award recipients.

It is believed that 1987 was the first year The Tire Society gave awards for technical presentations. Amazingly, the names of the recipients of these awards were not published in any of the conference programs, abstract books, journals, or other literature that the author was able to find.

To date, the only ways of determining the names of past award recipients have been reviewing conference photos showing people holding plaques and first-person interviews with award recipients. As a result, the list of award recipients is incomplete. It is hoped that more information will become available in the future. If you are aware of any awards winners that are not included in this table, please contact the author.

A common misconception about these awards is that they are based on the content of the published papers. In fact, the awards are based solely on the paper presentations that occur at the conference. The awards consider both the content

TABLE 13 — *Tire society officers.*[a]

Year	President		Vice President		Secretary		Treasurer	
	Name	Company	Name	Company	Name	Company	Name	Company
1980	*Harold Schwartz*[b]	*Dupont*	*F. Cecil Brenner*	*NHTSA*	*Samuel Clark*	*Univ. Michigan*	*Floyd Conant*	*Firestone*
1981	*Schwartz*	*Dupont*	*Brenner*	*NHTSA*	*Clark*	*Univ. Michigan*	*David Benko*	*Goodyear*
1982[c]	*Schwartz*	*Dupont*	*Brenner*	*NHTSA*	*Clark*	*Univ. Michigan*	*Benko*	*Goodyear*
1983	Schwartz	Dupont	Brenner	NHTSA	Clark	Univ. Michigan	Benko	Goodyear
1984	Schwartz	Dupont	Brenner	NHTSA	Clark	Univ. Michigan	Benko	Goodyear
1985	Brenner	NHTSA	Daniel Livingston	Goodyear (ret)	Richard Bauman	Uniroyal-Goodrich (ret)	Benko	Goodyear
1986	Brenner	NHTSA	Livingston	(ret)	Bauman	(ret)	Benko	Goodyear
1987	Livingston	(ret)	John Kelley	General Tire	Benko	Goodyear	Bauman	(ret)
1988	Livingston	(ret)	Kelley	General Tire	Benko	Goodyear	Bauman	(ret)
1989	Bauman	(ret)	Benko	Goodyear	Paul Shoemaker	General Tire	Joseph Walter	Bridgestone/ Firestone (B/F)
1990	Bauman	(ret)	Benko	Goodyear	Shoemaker	General Tire	Walter	B/F
1991	Benko	Goodyear	Walter	B/F	Shoemaker	General Tire	Krishna Baranwal	Uniroyal-Goodrich
1992	Benko	Goodyear	Dieterich Schuring	B/F (ret)	Shoemaker	General Tire	Michael Berzins	B/F
1993	Paul Shoemaker	General Tire	Schuring	(ret)	John Bauer	Goodyear	Berzins	B/F
1994	Shoemaker	General Tire	Schuring	(ret)	Bauer	Goodyear	Berzins	B/F
1995	Raouf Ridha	Goodyear	Berzins	B/F	Robert Pelle	Goodyear	Michael Trinko	Goodyear
1996	Ridha	Goodyear	Berzins	B/F	Pelle	Goodyear	Trinko	Goodyear
1997	Berzins	B/F	Robert Pelle	Goodyear	John Luchini	Cooper	Trinko	Goodyear
1998	Berzins	B/F	Pelle	Goodyear	Luchini	Cooper	Trinko	Goodyear
1999	Pelle	Goodyear	Luchini	Cooper	Marion Pottinger	Smithers	Farhad Tabaddor	Michelin
2000	Pelle	Goodyear	Luchini	Cooper	Pottinger	Smithers	Jozef DeEskinazi	Continental
2001	Luchini	Cooper Tire	Pottinger	Smithers	Neel Mani	Bridgestone (BATO)	DeEskinazi	Continental
2002	Luchini	Cooper Tire	Pottinger	Smithers	Mani	BATO	DeEskinazi	Continental
2003	Pottinger	Smithers	Neel Mani	BATO	Hamid Aboutorabi	Kumho	DeEskinazi	Continental
2004	Pottinger	Smithers	Mani	BATO	Aboutorabi	Kumho	DeEskinazi	Continental
2005	Aboutorabi	Kumho	Sunil Jha	BATO	Hans Dorfi	BATO	Keith Sansalone	Cooper
2006	Aboutorabi	Kumho	William Mars	Cooper	Dorfi	BATO	Sansalone	Cooper
2007	Dorfi	BATO	Robert Wheeler	Hankook	Dale Moseley	Goodyear	Tom Ebbott	Goodyear
2008	Dorfi	BATO	Wheeler	Hankook	Moseley	Goodyear	Ebbott	Goodyear
2009	Wheeler	Hankook	Moseley	Goodyear	Cedric Mousseau	Michelin	Ebbott	Goodyear
2010	Wheeler	Hankook	Moseley	Goodyear	Mousseau	Michelin	Ebbott	Goodyear
2011	Moseley	Goodyear	Cedric Mousseau	Michelin	Saied Taheri	Virginia Tech	Ebbott	Goodyear
2012	Moseley	Goodyear	Mousseau	Michelin	Taheri	Virginia Tech	Ebbott	Goodyear
2013	Mousseau	Michelin	Taheri	Virginia Tech	Randy Jenniges	MTS	Ebbott	Goodyear
2014	Mousseau	Michelin	Taheri	Virginia Tech	Jenniges	MTS	Ebbott	Goodyear
2015	Taheri	Virginia Tech	Jenniges	MTS	Michelle Hoo Fatt	Univ. Akron	Rusty Adams	Goodyear
2016	Taheri	Virginia Tech	Jenniges	MTS	Hoo Fatt	Univ. Akron	Adams	Goodyear
2017	Jenniges	MTS	Jim McIntyre	Camber Ridge	Yaswanth Siramdasu	Hankook	Adams	Goodyear
2018	Jenniges	MTS	McIntyre	Bridgestone	Siramdasu	Hankook	Adams	Goodyear
2019	Gerald Potts	TMSI (ret)	Mars	Endurica LLC	Yusheng Chen	Cooper	Madhu Rao	Goodyear
2020	Potts	ret	Mars	Endurica LLC	Chen	Eastman	Rao	Goodyear
2021	Mars	Endurica LLC	McIntyre	Bridgestone	Jim Cuttino	Link Eng.	Xianwei Meng	Goodyear

[a]Dotted lines indicate years without elections.

[b]Italicized names indicate "pro tem" officers who served prior to the first official election that was held at the 1982 conference.

[c]Officers are listed as "pro tem" in the 1982 conference program. At the 1982 conference, the first slate of Tire Society officers was elected.

TABLE 14 — *Tire Society Executive Committee (XCOM) members at large.*

Year	Members at large					
1980	Alan Gent	Daniel Livingston				
1981	Gent	Livingston				
1982	Gent	Livingston				
1983	Frederick Kovac	Howard Stephens				
1984	Kovac	Stephens				
1985	Kovac	Joseph Walter				
1986	Kovac	Walter				
1987	Franco Bottasso	Kovac	Walter			
1988	Bottasso	Kovac	Walter			
1989[a]						
1990	Bottasso	John Kelley Jr.	Kovac			
1991	Bottasso	Kelley	Kovac			
1992	Kelley	Kovac	Joseph Walter			
1993	Kelley	Kovac	Paul Serridge	Walter		
1994	Joseph Gingo	Hiromi Hamaya	Serridge	James Sears		
1995	Hamaya	Prashant Prabhu	Sears	Richard Steichen		
1996	Hamaya	Prabhu	Sears	Steichen		
1997	Hamaya	Sears	Steichen			
1998	Donald Botka	Hamaya	Raymond Labuda	Steichen		
1999	Hamaya	William Hopkins	Labuda	Eddie Morant		
2000	Hamaya	Hopkins	Labuda	Morant	Dan Saurer	
2001	Hopkins	Labuda	Morant	Saurer		
2002	Hopkins	Labuda	Morant	Saurer		
2003	Guy Edington	Bill Eisenhauer	Jon Gerhardt	Hopkins	Labuda	Morant
2004	Edington	Eisenhauer	Gerhardt	Hopkins	Labuda	Morant
2005	Carolyn Bernstorf	Jon Gerhardt	Hopkins	Will Mars		
2006	Bernstorf	Gerhardt	Hopkins	Mars		
2007	Hopkins	Randy Jenniges	Mars	Cedric Mousseau	Tim Rhyne	
2008	Hopkins	Jenniges	Mars	Mousseau	Rhyne	

TABLE 14 — Continued.

Year	Members at large						
2009	Tom Fleischman	Jenniges	Rhyne	Michael Snyman	Steve Vossberg		
2010	Fleischman	Jenniges	Rhyne	Snyman	Vossberg		
2011	Hamid Aboutorabi	Fleischman	Michelle Hoo Fatt	Jenniges	Vossberg		
2012	Aboutorabi	Fleischman	Hoo Fatt	Jenniges	Vossberg		
2013	Fleischman	Hoo Fatt	Lin Kung	Jim McIntyre	Vossberg		
2014	Fleischman	Hoo Fatt	Kung	McIntyre	Vossberg		
2015	David Dryden	Fleischman	Joshua Herron	Kung	McIntyre	Anoop Varghese	
2016	Dryden	Fleischman	Herron	Kung	McIntyre	Varghese	
2017	Celal Batur	Dryden	Herron	Kung	Pelle	Anurag Warhadpande	
2018	Batur	Dryden	Herron	Kung	Pelle	Warhadpande	
2019	Rusty Adams	Dryden	Kung	McIntyre	Pelle	Janice Tardiff	Warhadpande
2020	Adams	Dryden	Kung	McIntyre	Pelle	Warhadpande	
2021	Abdullah al Amin	Bin Chung	Dryden	Pelle	Yaswanth Siramdasu	Gregory Smith	

[a]Members at large for 1989 are currently unknown.

TABLE 15 — *Award recipients.*[a]

Year	Superior Paper[b]		Honorable Mention[b]				Student Award Authors
	Authors	Authors	Authors	Authors	Authors	Authors	
1987[c]	T. Warholic R. Pelle		M. Pottinger A. Fairlie	S. Futamura			
1988	W. Klingbeil H. Witt		N. Tseng R. Pelle J. Chang	I. Gardner M. Theves			
1989	N. Tseng R. Pelle J. Chang T. Warholic	J. DeEskinazi K. Ishihara H. Volk T. Warholic	P. Bandel C. DiBernardo	T. Sakata H. Morinura H. Ide	J. Padovan A. Kazempour		
1990	M. Pottinger		N. Tseng T. Warholic R. Pelle J. Chen F. Matyja				
1991			N. Tseng J. Chen T. Warholic R. Pelle G. Moore				
1992	S. Clark J. Luchini		A. Noor J. Tanner J. Peters	R. Gall P. Tkacik M. Andrews			
1993							
1994	A. Veith	J. Thompson					
1995	J. Lazeration	A. Goldstein	D. Dryden C. Dusseau J. Schumaker	D. Stalnaker J. Turner D. Parekh B. Whittle R. Norton	Y. Nakajima T. Kamegawa A. Abe		

TABLE 15 — Continued.

Year	Superior Paper[b]		Honorable Mention[b]				Student Award Authors
	Authors	Authors	Authors	Authors	Authors	Authors	
1996							
1997							
1998	M. Pottinger J. McIntyre		W. Mars J. Luchini				
1999	R. Kennedy M. McMinn						
2000	W. Mars	T. Fleischman V. Kerchman T. Ebbott	J. Luchini W. Mars M. Motil	R. Kennedy	J. Peters		
2001	J. Turner D. Stalnaker		S. Knisley	H. Aboutorabi	R. Jenniges		[d]
2002	E. Seta T. Kamegawa Y. Nakajima		B. Matute S. Koehne R. Mundl	V. Fries	R. Mousseau G. Markale		
2003	H. Dorfi		W. Summers N. Jarboe C. Richards				
2004	T. Rhyne		S. Shoop K. Kestler R. Haehnel	H. Dorfi	J. Bergstrom		
2005	T. Rhyne S. Cron		C. Richards T. Summers	R. Mundl M. Fischer W. Strache K. Wiese B. Wies K. Zinken			S. Hussain M. Hoo Fatt
2006	J. Luchini J. Popio		M. Pottinger J. Walter Eagleburger	J. Baldwin et al.	Wohlever Snyman	T. Rhyne S. Cron	M. Frank H. Dorfi R. Wollyung

TABLE 15 — Continued.

Year	Superior Paper[b]		Honorable Mention[b]				Student Award
	Authors	Authors	Authors	Authors	Authors	Authors	Authors
2007	T. Rhyne		Alman	L. Evans	M. Assaad et al.		F. Liu
	S. Cron		J. Popio	J. Maclssac			M. Sutcliffe
	McGinty		D. Stalnaker	S. Feve			W. Graham
2008	K. Kato et al.		M. Sobhanie et al	Moser et al.	Pascarella et al		R. Kupchella
							J. Kidney
							W. Hutchison
2009	M. Assaad	G McKay	M. Pottinger	Masumoto			W. Rutherford
	Du			Lida			S. Bezgam
	T. Ebbott						A. Proddaturi
							L. Thompson
							J. Ziegert
							T. Rhyne
							S. Cron
2010	H. Aboutorabi		Yum	Li			K. Singh
							S. Taheri
2011	T. Rhyne		M. Kaliske				J. Adcox
	S. Cron		Serafinska				B. Ayalew
			Zopf				T. Rhyne
							S. Cron
							M. Knauff
2012	B. Kimble		R. Pawlowski				
	Diaz						
	Vercammen et al.						
2013	R. Pawlowski		H. Dorfi				
2014	M. Kaliske		Anderson				
2015			W. Mars				
			M. Bauman				
			Y. Wei				
			W. Hao				

TABLE 15 — Continued.

Year	Superior Paper[b]		Honorable Mention[b]				Student Award Authors
	Authors	Authors	Authors	Authors	Authors	Authors	
2016			Y. Chen/Schlarb	D. Kelliher	Sagar		
2017	H. Olsson		Sagar et al.	C. Robertson			M. Garcia
	D. Gentz			W. Mars et al.			M. Kaliske
	Strang						
2018	S. Kahms		Singh	C. Boston			A. Trazkovich
	M. Wangenheim		Petry et al.	Hoever et al.			
2019							

[a]Award recipients were not published in the journal, abstract books, or other materials. Thus, many winners are currently unknown.
[b]One Superior Paper award is given each year, except in the case of a tie. One to four Honorable Mention awards are also given.
[c]The earliest known award winners are from 1987. These were determined from conference pictures showing the winners holding plaques. It is assumed that Superior Paper and Honorable Mention awards were given every year after this.
[d]The first student research competition was held in 2001. It is not known whether student paper awards were given in 2002–2004. However, it is believed that awards were given each year from 2005 to present.

of the presentations and the manner in which they are delivered; however, review of the manuscript content is not part of the process.

Determining award winners is done by a committee that circulates ballots among the attendees and that votes on each presentation. Membership in this committee changes each year. Table 16 shows members of the awards committees.

13.1 Student Awards

In 2001, The Tire Society held its first student research competition. The student awards are the only awards the society gives that are accompanied by cash. Initially, The Student Awards were based on students presenting a poster showing their work. These student presentations occurred during conference breaks. In 2006, the conference included the first dedicated session where students presented their papers as part of the regular conference. Later conferences, including 2012, went back to the poster format, but since 2013, the students have presented their work as a regular part of the conference. In 2009, Marion Pottinger titled the student paper sessions "New Light on Tire Technology," and that title is still used today. A number of past student presenters and award winners are now regular contributors to the society as both authors and volunteers.

The award process for students is slightly different from the process for Superior Paper and Honorable Mention awards. The student awards are judged by a dedicated committee, and they consider not only the presented material but also the written paper that is submitted.

13.2 Special Awards

In 1990, The Tire Society presented Floyd Conant its first known Service Recognition Award. Conant was the society's first Treasurer and was active with the journal for more than a decade as editorial adviser, associate editor, and senior associate editor.

In 1991, at the 10th annual conference, Fred Kovac was given "The Tire Society Award" for service to the society.

In 1996, David Benko was given a "Service Recognition Award" for his service to the society.

In 2005, Jozef DeEskinazi was given the "Outstanding Service Award" for his service to the society in numerous capacities, including journal editor and treasurer.

In 2008, the society established a formal procedure for giving awards for lifetime contributions. Two awards were established: the Distinguished Achievement Award, recognizing technical work; and the Distinguished Service Award, recognizing service to the society. A formal process for choosing recipients for these awards was laid out, including nominations, a review by a committee created by the XCOM (separate from the Awards

TABLE 16 — *Awards committee members.*

	Awards Committee chair		Awards Committee	
Year	Name	Company	Name	Company
1987	J. DeEskinazi[a]	General	[b]	
1988	S. Fielding-Russell	Goodyear		
1989	S. Fielding-Russell	Goodyear		
1990	K. C. Baranwal	Uniroyal-Goodrich		
1991	Mike Berzins	Firestone		
1992	Frank E. Matyja	General	Ron Kennedy	Firestone
			. . .[c]	. . .
1993	Ron Kennedy	Firestone		
1994	S. Parhizgar	Hankook		
1995	Ron Kennedy	Bridgestone	Lin Kung	Continental
			Gary Tubb	Goodyear
			Mahmoud Assaad	Goodyear
			Chris Morgan	Bridgestone
1996	R. Kennedy	Bridgestone		
	K. Gormish	Continental		
1997	Kenneth Gormish	Continental		
1998				
1999	Christopher Morgan	Kumho		
2000	Christopher Morgan	Kumho		
2001	Gary Tubb	Goodyear		
2002	Gary Tubb	Goodyear		
2003	Gary Tubb	Goodyear	Jim Peters[d]	Cooper
			Ron Kennedy	Hankook
			Gene Chen	BFS
			Marv Janssen	Hankook
			Barry Smith	Conti
2004	Gary Tubb	Goodyear	Josh Herron	Cooper
			Gene Chen	BFS
			Vladimir Kerchman	Kumho
			Barry Smith	Conti
2005	Gary Tubb	Goodyear	Robert Wheeler	Hankook
			Vladimir Kerchman	Kumho
			Barry Smith	Conti
			Tony Hughes	Cooper
			Steve Padula	Michelin
2006	Gary Tubb	Goodyear	Troy Hoagland	Cooper
			Uday Karmarkar	ARDL
			Samuel Knisley	Hankook
			Tom Niemoller	Kumho
			Brian Steenwyk	Bridgestone/Firestone
2007	Gary Tubb	Goodyear	Will Mars	Cooper
			Barry Smith	Continental
			Jan Terziyski	Hankook
			Tom Niemoller	Kumho
			Terrence Wei	Bridgestone
2008	Gary Tubb	Goodyear	Steve Cron	Michelin
			Gene Chen	Bridgestone/Firestone
			Josh Herron	Hankook
			Vladimir Kerchman	Kumho

TABLE 16 — Continued.

Year	Awards Committee chair		Awards Committee	
	Name	Company	Name	Company
2009	Gary Tubb	Goodyear (retired)	Josh Herron	Hankook
			Tom Niemoller	Kumho
			Nihar Raje	Bridgestone
			Tim Rhyne	Michelin
			Hitendra Singh	Cooper
			Barry Smith	Continental
2010	Gary Tubb	Goodyear (retired)	Rusty Adams	Goodyear
			Mike Pastwick	Kumho
			Tim Rhyne	Michelin
			Gautam Barot	Cooper
			Barry Smith	Continental
			Jan Terziyski	Hankook
			Anoop Varghese	Bridgestone
2011	Gary Tubb	Goodyear (retired)	Matthew Schroeder	Cooper
			Ric Mousseau	Michelin
			Mike Pastwick	Kumho
			Bob Pelle	Goodyear
			Jan Terziyski	Hankook
			KeJun Xie	Bridgestone
2012	Gary Tubb	Goodyear (retired)	Matthew Schroeder	Cooper
			Tim Rhyne	Michelin
			Mike Pastwick	Kumho
			Barry Yavari	Goodyear
			Jan Terziyski	Hankook
			Akiko Neil	Bridgestone
			Stuart Saunders	Nexen
2013	Gary Tubb	Goodyear (retired)	Matthew Schroeder	Cooper
			Anoop Varghese	Bridgestone
			Mike McMinn	Hankook
			Dan Osborne	Michelin
			Lin Kung	Nexen
			Barry Yavari	Goodyear
2014	Gary Tubb	Goodyear (retired)	Anurag Warhadpande	Bridgestone
			Matthew Schroeder	Cooper
			Josh Herron	Kumho
			Bob Wheeler	Hankook
			Ed Stone	Michelin
			Nathan Billy	Nexen
			Barry Yavari	Goodyear
2015	Gary Tubb	Goodyear (retired)	Anurag Warhadpande	Bridgestone
			Matthew Schroeder	Cooper
			Kejing Li	Hankook
			Ken Albers	Kumho
			Dan Osborne	Michelin
			Nathan Billy	Nexen
			Barry Yavari	Goodyear

TABLE 16 — Continued.

	Awards Committee chair		Awards Committee	
Year	Name	Company	Name	Company
2016	Gary Tubb	Goodyear (retired)	Anurag Warhadpande	Bridgestone
			Amir Sohrabi	Cooper
			Anudeep Bhoopalam	GiTi
			Kejing Li	Hankook
			Ken Albers	Kumho
			Nathan Billy	Nexen
			Barry Yavari	Goodyear
2017	Gary Tubb	Goodyear (retired)	[e]	
2018	Barry Yavari	Goodyear	Abdullah Al Amin	Bridgestone
			Lin Kung	Nexen
			Tan Li	Maxxis
			Steve Cron	Michelin
			Dennis Kelliher	Hankook
			Keith Sansalone	Cooper
2019	Barry Yavari	Goodyear	Abdulla Al Amin	Bridgestone
			Nathan Billy	Nexen
			Steve Cron	Michelin
			Dennis Kelliher	Hankook
			Tan Li	Maxxis
			Keith Sansalone	Cooper
2020	Barry Yavari	Goodyear		

[a]The first known Superior Paper award was presented in 1987. It is believed that this was the first year that awards were given.
[b]Blank cells are shown where names are unknown.
[c]The committee included others, but they are currently unknown.
[d]Committee members were first published in the abstract book in 2003.
[e]Awards Committee members are not shown in the 2017 program.

Committee), and balloting. To date, three Distinguished Achievement Awards have been given and one Distinguished Service Award.

In 2009, Samuel K. Clark received the first Tire Society Distinguished Achievement Award. Dr. Clark was a professor at the University of Michigan, active in TACT, the founding of F-09, and the founding of The Tire Society. Dr. Clark delivered the Invited Lecture (later called the Plenary Lecture) at the society's first conference in 1982. He served as the society's secretary from its founding until 1985 and as an editorial adviser and then associate editor for the journal for 34 years. Dr. Clark and John Luchini (previously his graduate student) received the Superior Paper Award in 1992. Dr. Clark passed away in 2005. At the recognition dinner, his award was accepted for the family by his son Samuel C. Clark.

In 2011, Takashi Akasaka received the second Tire Society Distinguished Achievement Award. Dr. Akasaka was a professor of precision mechanical engineering at Chuo University in Tokyo, Japan. He served as an editorial

adviser and then associate editor for the journal for 36 years. Dr. Akasaka had passed away in 2010, and at the recognition luncheon, his award was accepted for the family by his son Shuichi Akasaka.

In 2012, Marion Pottinger was awarded the only Tire Society Distinguished Service Award given to date. Marion was active in F-09 and was a session chair at the first Tire Society conference. He served as an associate editor and as the society's secretary, vice president, and president. He was instrumental in creating the Student Awards, which he coordinated for several years, and he stepped in to handle arrangements for the 2013 conference in collaboration with ITEC after John Luchini had to resign due to health issues. Marion received three Honorable Mention and one Superior Paper Award (in collaboration with the author), and he holds the distinction of receiving an award for every paper that he has presented to the society. In retirement, Marion still attends The Tire Society conferences and is known to most attendees.

In 2013, Hans Pacejka received the third Tire Society Distinguished Achievement Award. Dr. Pacejka was a professor of at Delft University in The Netherlands. He was an expert in vehicle dynamics and founded the journal *Vehicle System Dynamics*. Dr. Pacejka holds the distinction of delivering The Tire Society's Plenary Lecture twice, in 1991 and again in 1993. He served as an editorial adviser and then associate editor for the journal for 29 years. At the award luncheon, Dr. Pacejka delivered a retrospective. Dr. Pacejka passed away in 2017.

14 The Marketing Committee

Marketing The Tire Society is an important part of keeping it a vital organization. This must be done with a very limited budget. Since most of the active members of the society are scientists, promotion and marketing of the society is a skill that has had to be learned.

Around 1995, the society issued its first press release regarding the conference to the *Akron Beacon Journal*. The first survey of conference attendees was conducted in 1996. And in 1997, Bob Pelle became the society's first webmaster.

Figure 16 shows the first web page for the society. The web page has evolved over the years. Figure 17 shows a second generation of the web page, featuring the "blue" format of the journal covers.

Beginning around 2005–2006, a committee led by Past-President Marion Pottinger began exploring ways to increase the society's visibility. That committee created a new logo for the society, along with a promotional trifold that was printed in color on glossy card stock and distributed by mail and at other conferences.

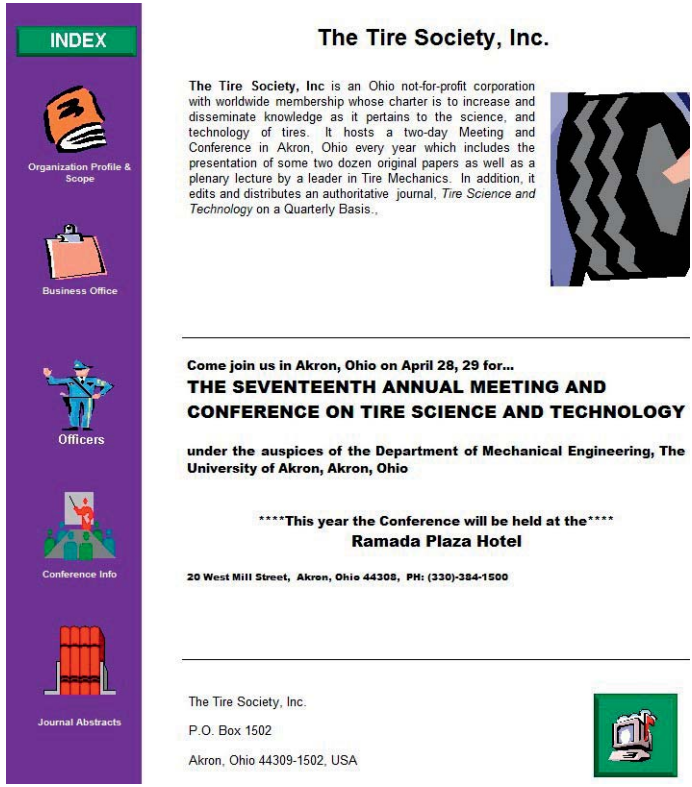


FIG. 16 — *The Tire Society's first web page*.

Figure 18 shows the society's logos over the years. During the ASTM era, the journal carried the then-current ASTM logo. The society's first logo featured a side view of a white-wall tire and a wheel. The tire/wheel was used on the journal covers, and the same picture with the words THE TIRE SOCIETY, Inc. was used on letterhead.

The 2006 logo showed an isometric computer image of an unmounted tire with a directional tread pattern. The tire appeared to be rolling from right to left. The image featured black arrows in the direction of the three tire forces in the SAE J670 Z-up Tire Axis system [31] and yellow, red, and blue arrows in the directions of the three moments. The name THE TIRE SOCIETY was spelled out in a stylized tread pattern on the road.

In 2010, the XCOM appointed a formal Promotions and Publicity Committee, which included a member of the staff of the ACS Rubber Division, which was then managing The Tire Society office. While XCOM meeting minutes contain reports from the Promotions and Publicity committee from

FIG. 17 — *Second-generation web page.*

FIG. 18 — *Tire Society logos.*

2013–2015 forward, these mostly involve publishing calls for papers. The committee did not appear to have engaged in significant other marketing of the society during that time.

In 2016, then president Randy Jenniges reactivated the Promotion and Publicity Committee, later renamed the Marketing Committee. That committee has taken over marketing-specific duties from the XCOM. It has primary responsibility for the society's web page, for identifying and recruiting sponsors, for seeking media partnerships, and for surveying the membership.

In 2016, Ric Mousseau published the first Tire Society newsletter in cooperation with Allen Press. Ric ceased publishing the newsletter later that year when his term as past-president expired.

In 2017, the Marketing Committee began publishing a quarterly newsletter that is emailed to the membership. The newsletter includes information about the society and conference, profiles of Tire Society volunteers, and excerpts from selected journal articles. David Dryden of Cooper Tire created the newsletter and currently acts as its editor. Figure 19 shows the first page of one of the newsletters.

The Marketing Committee meets regularly, and it reports to the XCOM. Current members include Marketing Committee Chair Bob Pelle (of Goodyear), David Dryden (of Cooper), Will Mars (of Endurica), Anurag Warhadpande, and Abdullah Al Amin (of Bridgestone).

In 2018, the society's logo was redesigned by an Allen Press intern. The new logo is a more stylized and simplified representation of the unmounted tire and directional tread, with the tire still rolling from right to left. The colors of the three arrows from the 2006 logo were used to define the shape of the tire and the words TIRE SOCIETY (with TIRE emphasized) were moved to the middle of the tire. This simplified image was designed to better emphasize the name on web pages and other electronic media. Allen Press presented the proposed new logo and a new graphic format for the society's web page to the XCOM in spring 2018, and the XCOM adopted them for the 2018 conference. This logo is used today.

In 2018–2019, the web page changed to use the new logo and an associated graphic format that had been designed by Allen Press. Figure 20 shows the current form of the web page, which features graphics and a layout that are more contemporary. The new format is much easier to update, so that it can be updated more frequently as events warrant. This has been particularly valuable given the 2020 conference changes.

15 The Conference Committee

Although members of a conference committee were listed in the first conference program, it is not known how the conference was organized in its

NEWSLETTER

January 2020

Please forward our monthly Tire Society newsletters to any colleagues and friends you think might be interested in learning more about the Tire Society and our mission to increase and disseminate knowledge of the science and technology of tires.

Tire Society Conference News

Intelligent Transportation will be theme of 2020 Conference

"Intelligent Transportation" is the theme for this year's Conference on Tire Science and Technology to be held **September 9-10** at the Akron-Fairlawn Hilton in Akron, Ohio. (Though typically scheduled for Tuesday and Wednesday, the first day of this year's Annual Meeting and Conference has been shifted a day later to start on **Wednesday** due to the Monday holiday in the U.S.)

As *the* scientific professional organization for the tire industry, the Tire Society welcomes all interested individuals to join our annual forum where researchers, policymakers, students, and industry advocates come to exchange knowledge, communicate research results, and hear about the most advanced thinking from the scientific leaders who work at the boundary of the known and the unknown for tires.

In addition to the Keynote address by an industry leader (to be announced in an upcoming newsletter), the Conference will also include a Plenary lecture by a recognized technical expert addressing the implementation of technology and science, panel discussions, and two days of technical paper presentations filled with opportunities for networking and meeting your industry colleagues.

Students and young professionals are encouraged to participate and join in the unique opportunities to gain experience, develop leadership skills, and network with people who share their professional passion. The best paper submitted by a full-time university student will receive a cash prize. More information about the Student Paper requirements and submission process is posted on our website.

Tire Industry Trends
Regulations & Standards, Autonomous/Shared Vehicles, Next Generation Mobility, Sustainable Material Sourcing

Emerging Technologies
Smart Tires, RFID, Sensors, Tire Electronics, Non-pneumatic Tires

Tire Performance
Durability, Rolling Resistance, F&M, Testing, Tire Design

Tire / Vehicle / Road
Vehicle Dynamics and Stability, Ride, Harshness, Noise, Wear, Rollover, Pull, Uniformity, Friction, Tire Effects on Pavement

Data Analytics; Big Data
Tire/Vehicle Performance, Materials/Lab Data, Simulation Results, Manufacturing Processes and Intelligent Factory

Virtual Design
Tire Modeling and Model Characterization, Constitutive Models, Virtual Prototyping, Advancements in Tools and Techniques

Tire Materials
Polymers, Cords, Steel, Green & Cured Rubber, Material Characterization, Tire Lifecycle

Tire Manufacturing
Advances in Established and Emerging Methods, Simulation

FIG. 19 — *The Tire Society newsletter.*

early years. From the time the author joined the society in 1998 until 2018, the Conference Committee consisted of a program chairman (sometimes called conference chairman), one or more assistant program chairmen, and a group of session chairs. Table 17 shows a list of these chairs.

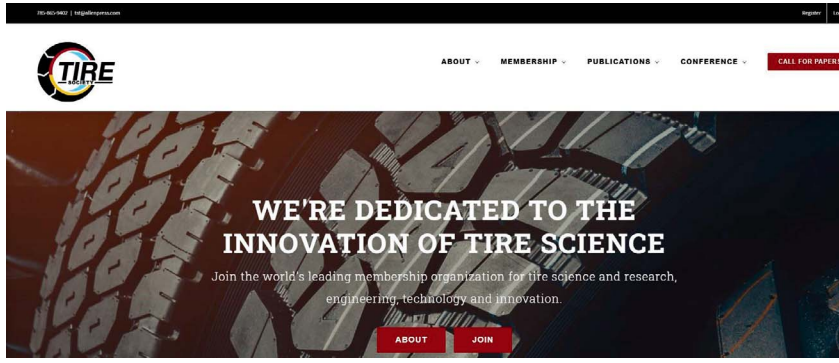


FIG. 20 — *The Tire Society's web page today.*

Basic organization of the conference, wording of calls for papers, selection of articles, scheduling, and coordination with the authors was done by the program chairman, who served for 1 year. The assistant program chairman typically served for 1 year and then became the program chairman for the next conference.

Session chairs typically were appointed a few months before each conference and so had minimal role in planning the conference or in recruiting authors. Their primary role occurred during the conference: teaching authors what to expect, introducing the authors and reading their biographies, and managing the question-and-answer session after each author's presentation.

This organization resulted in several problems:

1. The success or failure of the conference was dependent on a single program chairman.
2. The time requirement for the program chairman was excessive (the author estimates he spent more than 500 hours working on the conference when he was program chairman in 2008).
3. The only focus of the committee was on what could be done at the current year's conference. There was minimal consideration of how the conference might be planned to evolve over time.
4. The program chairmen became burned out by the experience, and so a large part of their experience was lost each year in transition.

The author first proposed significant changes to this structure in 2008. In 2016, President Randy Jenniges proposed creation of a standing Conference Committee as part of his plan for reorganization of the society. However, it was not until 2018 that the XCOM approved the author's motion to form such a committee. The new committee is structured as follows:

- The Conference Committee Chair serves multiple years and is responsible for holding monthly meetings of the Conference Committee and for acting as its liaison to the XCOM. The committee chair also recommends members of the committee to the XCOM.
- The Program Chair is still the primary person responsible for the organization of the conference each year: for interfacing with authors, handling the selection of papers, and arrangement of the schedule.
- After the conference, the past Program Chair is asked to continue to attend the monthly meetings and advise the committee, without any other specific responsibilities.
- Assistant Program Chairs are appointed 2 or more years in advance, eventually becoming program chair and past program chair.
- The biggest change is to the role of the session chairs. In addition to their previous duties, session chairs are now appointed for 2- to 4-year terms, and

TABLE 17 — *Conference chairmen and session chairs.*

	Program chairman		Session chairs	
Year	Name	Company	Name	Company
1982	Rudolph J. Scavuzzo	University of Akron	K. W. Scott	Goodyear
			T. J. Dudek	General
			A. L. Browne	GM
			H. L. Stephens	University of Akron
			M. Pottinger	BFG
			D.J. Schuring	Firestone
1983	E. A. Meineke	University of	N. Yoshimura	Bridgestone
	H. L. Stephens	Akron	S. L. Aggarwal	General
			R. J. Scavuzzo	University of Akron
			R. G. Bauman	BFG
			F. W. Stuchal	Goodyear
			J. D. Walter	Firestone
1984	J. L. White	University of Akron	H. Kingman	Michelin
			R. D. Martin	Firestone
	F. W. Stuchal	Goodyear	R. L. Shipley	BFG
			L. F. Marker	General
			B. T. F. Chung	University of Akron
			A. G. Thomas	Goodyear
			R. Barker	Monsanto
1985	H. K. Brewer	NHTSA	F. Bottaso	Pirelli
	Seymour Lippman	Uniroyal	J. R. Luchini	Cooper
			E. S. Eigenfeld	Firestone
			F. Tabaddor	BFG
1986	Dieterich J. Schuring	Firestone	S. K. Clark	University of Michigan
			G. R. Potts	G. R. Potts Assoc.
			F. S. Conant	STL
			J. T. Tielking	Texas A&M
			J. J. Voracheck	Goodyear
			J. S. Gerhardt	GenCorp
			J. A. Tanner	NASA
			M. Pottinger	BFG
			J. R. Luchini	Cooper
1987	Paul S. Shoemaker	General Tire	W. Klingbeil	Uniroyal-Goodrich
			J. DeEskinazi	General
			R. Moore	GM
			T. Reese	Continental
			T. Bouton	Firestone
			W. Soedel	Purdue University
1988	David Glemming	Goodyear	C. L. Chow	University of Hong Kong
			R. W. Pantalone	Firestone
			A. G. Causa	Goodyear
			H. Rothert	University of Hannover
			J. S. Gerhardt	General
			N. M. Trivisonno	Uniroyal-Goodrich

TABLE 17 — Continued.

Year	Program chairman		Session chairs	
	Name	Company	Name	Company
1989	Nicholas Trivisonno	Uniroyal/ Goodrich	B. Barbin	Goodyear
			G. Guilini	Pirelli
			S. Futamura	Bridgestone
			J. L. White	University of Akron
			K. Oblizajek	Uniroyal-Goodrich
			M. Muthukrishnan	General
1990	Dietrich. J. Schuring	Bridgestone/ Firestone	R. J. Emerson	General
			M. L. Janssen	BFS
			Iqbal Rai	Goodyear
			G. R. Potts	G. R. Potts Assoc.
			J. D. Avouris	Ford
			D. J. Schuring	BFS
1991	N. T. Tseng	General Tire	M. G. Pottinger	Smithers
			L. E. Fritschel	Bridgestone/Firestone
			M. J. Trinko	Goodyear
			H. Rothert	University of Hannover
			J. T. Tielking	Texas A&M
1992	Michael J. Trinko	Goodyear	H. Volk	Continental
			D. Young	Exxon
			J. Padovan	University of Akron
			R. Gall	Michelin
			L. Charek	Goodyear
			R. Pelle	General
1993	Farhad Tabaddor	Michelin	P. Serridge	Michelin
			J. Turner	Bridgestone
			M. Pottinger	Smithers
			J. DeEskinazi	General
			J. Padovan	University of Akron
			A. Goldstein	Goodyear
1994	S. Futamura	Bridgestone/ Firestone	Douglas A. Neidhart	General
			Thomas G. Ebbott	Goodyear
			Benjamin T. F. Chung	University of Akron
			Hiroshi Mouri	BFS
			Rolf Gall	Michelin
1995	Jozef DeEskinazi	Continental/ General	T. Williams	Hankook
			G. Zolton	Continental
			B. Whittle	Ford
			Y. Nakajima	Bridgestone
			A. Talug	Goodyear
			R. Margadonna	Michelin
			J. Luchini	Cooper
1996	Arthur Goldstein	Goodyear	David Stalnaker	BFS
			Rick Scavuzzo	Goodyear
			Ric Mousseau	Ford
			William J. Toth	Pirelli
			Doug Slagh	Michelin
			Ronald Kennedy	Hankook

TABLE 17 — Continued.

	Program chairman		Session chairs	
Year	Name	Company	Name	Company
1997	Doug Slagh[a]	Michelin Americas	Tim Rhyne	Michelin
			Hans Dorfi	BFS
			Joe Lazeration	Goodyear
			Ken Gormish	Conti
			Farhad Tabaddor	Michelin
			Neel Mani	BFS
1998	Neel Mani	Bridgestone/	Dong Zheng	Conti
	K. Sansalone (asst.)	Firestone	Werner Klingbeil	Uniroyal-Goodrich
		Bridgestone/	Guy Edington	(retired)
		Firestone	J. J. M. van Oosten	Kumho
			John L. Turner	TNO
			Lazlo Sarkozi	BFS
			John R. Luchini	University of Miskloc
			Tim Rhyne	Cooper
			Mahmood Assaad	Michelin
			Bengt Siefert	Goodyear
			Robert Wheeler	Conti
			Yin Tao Wei	Hankook
				Harbin
1999	Keith Sansalone	Firestone/	Rolf Gall	Shanghai
		Cooper	John Turner	BFS
	R. Wheeler (asst.)	Hankook	Neel Mani	BFS
			Denny Dubs	Goodyear
			Marv Janssen	Hankook
2000	Robert Wheeler	Hankook	Rolf Gall	Shanghai
	D. Dubs (asst.)	Goodyear	Hamid Aboutorabi	Kumho
			Farhad Tabaddor	Michelin
			Keith Sansalone	Cooper
			Tom Williams	Hankook
			Frank Matyja	Conti
			Vladimir Roth	BFS
2001	Dennis Dubs	Goodyear	Ron Kennedy	Hankook
	G. Zolton (asst.)	Continental	Gobi Gobinath	Goodyear
			Will Mars	Cooper
			John Lightner	BFS
			Hans Dorfi	Hankook
			Steve Vossberg	BFS
			Marion Pottinger	Smithers
			Keith Sansalone	Cooper
2002	Gary Zolton	Continental	Marv Janssen	Hankook
	J. Gerhardt (asst)	University of Akron	Kenneth N Morman Jr.	Cooper
			L. Rozelle Hirschfelt	Kumho
			Will V Mars	BFS
			Hamid Aboutorabi	
			William Eisenhauer	

TABLE 17 — Continued.

Year	Program chairman		Session chairs	
	Name	Company	Name	Company
2003	John Gerhardt	University of Akron	Michael Snyman	Abaqus
			Jim Popio	Smithers
	W. Mars (asst.)	Cooper Tire	John Turner	BFS
			Ron Kennedy	Hankook
			Tim Rhyne	Michelin
			Ric Mousseau	University of Toledo
2004	Will V. Mars	Cooper Tire	John Lightner	BFS
	R. Mousseau (asst.)	University of Toledo	Ajay Mehta	Michelin
			Keith Sansalone	Cooper
			Jon Baldwin	Ford
			David Stalnaker	BFS
			Sam Knisley	Hankook
			Jamie MacIsaac	NHTSA
2005	Ric Mousseau	University of Toledo/GM	Steve Vossberg	BFS
			Robert Wheeler	Hankook
	R. Kennedy (asst.)	Hankook	Sally Shoop	US Army CRRL
			Jim McIntyre	Smithers
			Steve Haas	Michelin
			Dave Dryden	Cooper
2006	Ron Kennedy	Hankook	Tom Fleischman	Goodyear
	M. Assaad (asst.)	Goodyear	Ching-Chih Lee	Goodyear
			Reinhard Mundl	Conti
			Jeff Schroeder	Cooper
			Farhad Tabaddor	Michelin
			Chris Wohlever	Abaqus
2007	Mahmoud Assaad	Goodyear	Kevin Ellwood	Ford
	J. McIntyre (asst.)	Smithers	Mohammed Sobhanie	Goodyear
			Ric Mousseau	GM
			Zhen-Zhiong Du	Dassault
			Donald Amos	Conti
			Lin Kung	Kumho
			Barry Yavari	Goodyear
			Cigdem Gurer	Goodyear
			Abraham Pannikottu	Q Tires
			Bill Rockwell	ESTECO
2008	Jim McIntyre	Smithers	John Luchini	Cooper
	E. Terrill (asst.)	ARDL	Terrence Wei	Bridgestone
			Barry Yavari	Goodyear
			Osama Hamzeh	Goodyear
			Lin Kung	Kumho
			Marion Pottinger	M'gineering
			Jan Terziyski	Hankook
			Terry Ruip	Goodyear

TABLE 17 — Continued.

	Program chairman		Session chairs	
Year	Name	Company	Name	Company
2009	Ed Terrill	ARDL	John Luchini	Cooper
	B. Yavari (asst.)	Goodyear	Marion Pottinger	M'gineering
			Osama Hamzeh	Goodyear
			Rusty Adams	Goodyear
			Russ Moser	Bridgestone
			Jan Terziyski	Hankook
			Saied Taheri	Virginia Tech
			John Harris	TRC
2010	Barry Yavari	Goodyear	Hamid Aboutorabi	Kumho
	S. Taheri (asst.)	Virginia Tech	Sam Knisley	Hankook
			Ric Mousseau	Michelin
			Vijay Muralidharan	Goodyear
			Marion Pottinger	M'gineering
			Kory Smith	Bridgestone
			Ben Wen	Goodyear
2011	Saied Taheri	Virginia Tech	Randy Cooper	Yokohama
	L. Kung (asst.)	Nexen	James Cuttino	Camber Ridge
			Josh Herron	Hankook
			Patrick Keating	Yokohama
			Victor Li	Goodyear
			Xianwei Meng	Goodyear
			Marion Pottinger	M'gineering
			Kory Smith	Bridgestone
			Mohammad Sobhanie	Goodyear
2012	Lin Kung	Nexen Tire	Gary Zolton	Nexen
	M. Sobhanie (asst.)	Goodyear	Michelle Hoo Fatt	University of Akron
			Kory Smith	Bridgestone
			Minwu Yao	Goodyear
			Ron Kennedy	Hankook
			James Cuttino	Camber Ridge
			Jim McIntyre	Smithers Rapra
			Keith Sansalone	Cooper
			Guy Edington	STL
2013	Mohammed Sobhanie	Goodyear	Marion Pottinger	M'gineering
	J. Barr (asst.)	Bridgestone (BATO)	Mahmoud Assaad	Goodyear
			Jim McIntyre	Smithers Rapra
			Michelle Hoo Fatt	University of Akron
			Kory Smith	Bridgestone
			Ron Kennedy	Hankook
			Michael Kaliske	T.U. Dresden
			Kanwar Bharat Singh	Goodyear
			John Luchini	Cooper

TABLE 17 — Continued.

Year	Program chairman		Session chairs	
	Name	Company	Name	Company
2014	Jason Barr	Bridgestone (BATO)	Dan Osborne	Michelin
			Michelle Hoo Fatt	University of Akron
	A. Varghese (asst.)	Bridgestone (BATO)	Steve Vossberg	Bridgestone (retired)
			Lin Kung	Nexen
			Joel Lazeration	Goodyear
			Jan Terziyski	Hankook
			Randy Jenniges	MTS
			Will Mars	Endurica
2015	Anoop Varghese	Bridgestone (BATO)	Janice Tardiff	Ford
			Ric Mousseau	GM
	K. Singh (asst.)	Goodyear	Kory Smith	Bridgestone
			Michelle Hoo Fatt	University of Akron
			Jaehyung Ju	University of North Texas
			Dan Osborne	Michelin
			Carlo Fabrizi	Bridgestone
			Jim McIntyre	Camber Ridge
2016	Kanwar Singh	Goodyear	Janice Tardiff	Ford
	J. Herron (asst.)	Kenda	Peter Tkacik	UNC Charlotte
			Kory Smith	Bridgestone
			Michelle Hoo Fatt	University of Akron
			Rusty Adams	Goodyear
			Alex Trazkovich	Cooper
			Jan Terziyski	Nexen
			Joel Lazeration	Goodyear
2017	Joshua R. Herron	Kenda	Janice Tardiff	Ford
	N. Billy (asst.)	Nexen	Kejing Li	Hankook
			Brian Steenwyk	Bridgestone
			Celal Batur	University of Akron
			Bart Kimble	Goodyear
			Yusheng Chen	Cooper
			Chris Robertson	Endurica
			Matt Schroeder	Cooper
2018	Nathan Billy	Nexen	Janice Tardiff	Ford
	A. Bhoopalam (asst.)	GiTi Tire	Kejing Li	Hankook
			Celal Batur	University of Akron
			Gautam Barot	Kumho
			Matt Schroeder	Cooper
			Yaswanth Siramdasu	Hankook
			Jan Terziyski	Nexen
			Will Mars	Endurica

TABLE 17 — Continued.

Year	Program chairman		Session chairs	
	Name	Company	Name	Company
2019	Anudeep Bhoopalam	GiTi Tire	Gautam Barot	Kumho
	M. Khaleghian (asst.)	Texas State University	Yaswanth Siramdasu	Hankook
			Yusheng Chen	Cooper
	M. Schroeder (asst.)	Cooper	Jan Terziyski	Nexen
			Matt Schroeder	Cooper
			Corissa Lee	Exponent
			Timothy Davis	Goodyear
			Gobi Gobinath	Goodyear
2020	Meysam Khaleghian	Texas State University	Yaswanth Siramdasu	Hankook
			Yusheng Chen	Eastman
	M. Schroeder (asst.)	Cooper	Jan Terziyski	Nexen
	G. Gobinath (asst.)	Goodyear	Corissa Lee	Exponent
			Timothy Davis	Goodyear
			Eric Pierce	Smithers
			Lin Kung	Cooper
			Qian Li	Maxxis
			Tan Li	

[a]The program chair served as an assistant program chair for 1 or more years before becoming chair. It is unknown when this practice began, but programs from 1997 and before generally do not list assistant program chairs.

they are asked to attend and participate in the monthly meetings and to take an active role in recruiting authors for the conference.

Conference Committee meetings occur monthly by teleconference, typically last 45–90 minutes, and include regular discussion of both current and future conferences. The rationale behind the standing committee is to involve more people in the process of conference planning, to improve continuity in that planning process, and to look ahead beyond the current conference to strategically implement new ideas to evolve and improve the conference.

16 The Executive Advisory Board

Article VIII of the society's constitution provides for appointment of an Executive Advisory Board by the XCOM. The board is intended to be composed of senior technical and executive managers from the tire industry or related academia. The duties of this board are to review the activities of the society and to make recommendations to the XCOM for future directions.

Table 18 lists the members of the advisory board with dates of service. Although provision for such a board exists in The Tire Society Constitution,

TABLE 18 — *Tire Society executive advisory board members.*

Name	Title	Organization	Start Year	End Year
Paul Sekula	Executive Director, Product Technology	Bridgestone	2009	2011
Marty Yurjevich	Executive Director, Adv. Tire Engineering	Bridgestone	2012	2017
Yukio Nakajima[a,b]		**Bridgestone?**	**2014**	**2014**
Robert Asper	Director, Adv. Systems Engineering	Bridgestone	2018	Present
Burkhard Wies	VP Tire Line Development Worldwide	Continental	2008	2008
Joerg Dehnert	VP Tire Line Development Worldwide	Continental	2009	Present
Chuck Yurkovich	VP of Global Technology	Cooper	2009	2018
David M. Dryden[a]	**Director Materials Development**	**Cooper**	**2011**	**2011**
Jeff Endicott		Cooper	2019	2019
Curtis Selhorst	VP Global Product Eng.	Cooper	2020	Present
Bill Hopkins	VP - Retired	Goodyear	2008	2009
Joe Zekoski	VP - Global Prod Dev	Goodyear	2010	2017
Steve Rohweder	VP - Technology Dev.	Goodyear	2018	Present
Ray Labuda	VP - Tire Technology	Hankook	2008	2012
Tom Kenny	VP - Tire Technology	Hankook	2013	2014
Bob Wheeler	Head, ATC	Hankook	2015	Present
Terry M. Edwards	VP and GM	Kumho	2008	2014
Terry M. Edwards	CTO	Linglong	2015	Present
David Stafford	COO, Michelin Americas Research	Michelin	2009	2012
Paul Grosskopf	VP R&D	Michelin	2013	2019
Don Lorey[a]		**Michelin**	**2017**	**2017**
John Emerson	Director R&D Operations	Michelin	2020	Present
George K Haritos	Dean, College of Engineering	University of Akron	2008	2015
Donald P. Visco	Dean, College of Engineering	University of Akron	2016	2018
Brian Davis	Associate VP/Controller	University of Akron	2019	2019
Shing-Chung Wong	Prof. Mech. And Biomed. Eng.	University of Akron	2020	Present
Daniel M Guiney	Director Technical Service	Yokohama	2009	2015
Pat Keating[a]	**Manager of Technical Engineering**	**Yokohama**	**2011**	**2011**
Tom Kenny	Director Technical Service	Yokohama	2015	Present
Hamid Aboutorabi	President R&D Center	GiTi Tire	2017	Present

[a]Bold font represents members filling in for regular board members.

[b]Dr. Nakajima is listed in the 2014 abstract book as being on the advisory board representing Cooper Tire. This is not possible, as Dr. Nakajima never worked for Cooper. His biography states that he worked for Bridgestone from 2000 to 2010 and then in 2010 became a professor at Kokaguin University. The same abstract book shows Dr. Nakajima representing the university as a member of the Editorial Board, so it is assumed that his entry here was a typographical error. The author spoke with Marty Yurjevich, who was not listed on the Advisory Board in the 2014 program, and Mr. Yurjevich stated that he believed he had been present for that meeting.

dated 2002, the first appointment of a board did not occur until 2008, and the first board meeting took place in 2009 at the annual conference.

In the early days of the society, XCOM member at large positions were typically filled by senior executives. However, as the duties of the XCOM increased, the ability of many of these individuals to fully participate in the running of the society was limited. The Executive Advisory Board was created as a way to involve a larger number of company representatives with a small individual time requirement.

From 2009 until 2018, the advisory board met only once each year (at the conference). During that time, the primary functions of the board were approval of expenditures and identification of potential volunteers within their organizations. Since 2018, the board has been asked to take a more active role, with two to three meetings each year, and it is being asked to actively assist in planning the strategic direction of the society.

Many members of the advisory board have been around the society for many years, but they do not generally participate in the day-to-day operation of the society, so they provide the XCOM with different perspectives and ideas.

17 The Tire Society Office

Although in the early years of the society's existence, the journal was printed by Goodyear, it was necessary that the society have an office to handle activities related to mailing of the journal and conference literature, receipt of conference registrations, and other day-to-day functions. While serving as treasurer, David Benko also became the society's first office manager. Benko conducted the society's business and correspondence from his home from 1981 until 1985.

The 1986 move away from using Goodyear as the journal publisher also led to a change in The Tire Society office. In 1985, during the transition, Richard Bauman served as the office manager for 1 year, and the office was run from the BF Goodrich R&D Center in Brecksville. In 1986, the society hired its first professional office manager, Nancy Elms. Elms ran the office from two locations until 1991 or 1992.

Around 1992, Howard Snyder became the office manager of the society, a position he held until his retirement in 2009. In addition to running the office and handling mailings and the membership/registration, Howard was a careful record keeper, and the materials that he saved form the heart of the society's archives. These include calls for papers, conference programs, abstract books, and a master set of paper journals from 1973 through 2009.

Since Howard retired, The Tire Society has not retained any centralized copies of paper journals or other conference records. It will be left to others to supply these. Much of this information now exists in digital form, but the

society is in danger of losing important tools to document the last decade of its history.

From approximately 1992 until 2008, Mechelle Miller assisted Howard Snyder with local arrangements for the conference. This unofficial position became significantly more important starting in 1998, when the conference moved from the University of Akron to a series of Akron hotels, as the move involved negotiation of contracts for the conference facilities.

In 2008, Miller retired from Goodyear, and the society began using the services of the ACS Rubber Division for conference planning. A process to transition to Rubber Division management of the office began. The society office and conference arrangements were run by the Rubber Division for 2 years, and XCOM meetings were held in its Akron office during that period.

Like The Tire Society, the Rubber Division holds regular technical meetings and publishes a technical journal (the journal *Rubber Chemistry and Technology*). However, in a practical sense, the scopes of the two organizations differ, with The Tire Society focusing on both material and nonmaterial aspects of tire technology and the Rubber Division focused on rubber, but not limited to the use of rubber in tires.

The overlap suggested that it might be possible for the two organizations to collaborate (for example, by holding shared conferences). However, during the time when the Rubber Division was managing The Tire Society office, the society was involved in a separate collaboration with ITEC, and thus no conference or journal collaboration between the society and the Rubber Division developed.

In late October 2011, ACS notified the society that it would require contract changes and significant fee increases if the Rubber Division was to continue managing The Tire Society office in 2012. These would have affected conference scheduling and plans to expand the office management role to include promotions and webpage management. The XCOM decided that it needed to consider other alternatives. A decision was required before January 2012.

With time short, the XCOM created a subcommittee and, in November, it sent out requests for proposals. Five responses were received, and these were evaluated while negotiations continued with ACS.

At the end of December 2011, the XCOM selected The Third Eye Group to manage the society's office and to coordinate local arrangements for the conference, and a 3-year contract was signed starting in January 2012. The XCOM offered to continue technical collaboration and cross-promotional activities with the Rubber Division, but that relationship effectively ended with the expiration of the management contract.

In 2014, a mutual decision was made not to renew the contract with Third Eye. Unfortunately, some Tire Society materials appear to have been lost during the transition, and some society financial records needed to be reconstructed afterward.

TABLE 19 — *2019 budgeted conference costs per attendee.*

Item	Budgeted cost
Room rental and A/V	$102.83
Food and beverages	$159.16
Meeting management fees	$146.55
Total cost	$408.54
Registration fee	$440.00
Net	$31.46

In 2015, the society chose Allen Press, its journal publisher, to manage its office and to host its website in 2015. Terry Leatherman, Chris Lapine, and Katie Rempala have been the primary Allen Press representatives. Terry and Chris have taken an active role in Tire Society XCOM and subcommittee meetings and have also managed the conference and hotel arrangements.

18 Sponsors

Society leadership has worked hard to keep the costs of the conference reasonable. In recent years, nearly all of the cost of registration has gone to offset direct costs of the conference [27]. Table 19 shows an example from the approved budget for the 2019 conference. As you can see, more than 90% of the registration fees went directly toward offsetting costs of the conference. A significant reason this has been able to be sustained in recent years has been financial sponsorship of the conference by businesses.

Although it is more than fair to say that Goodyear was the society's first sponsor, the author negotiated the first "official" sponsorship with his then-employer, Smithers Scientific Services, in 2003. This in-kind sponsorship, involving Smithers printing the conference abstract book at no charge to the society, has continued from 2003 to 2018, except for 2012, when the abstract book was printed by ITEC. The arrangement was beneficial for both parties. Since Smithers was already engaged in printing reports and studies, its actual cost to print the abstract book was less than half of the retail price that the society would have paid to have it done commercially. Having its name in the book as a sponsor provided Smithers low-cost advertising to a target audience. In 2019, Allen Press printed the abstract book, and Smithers gave a cash contribution.

As mentioned above, Goodyear's informal support of the society over many years was essential to the development and growth of the society. In addition, Goodyear has acted as a formal sponsor, including financially supporting the student paper awards for many years.

In 2004, the society created its first formal sponsorship program. In 2008, a series of sponsorship levels were created, using tire speed ratings: S, T, H, V,

TABLE 20 — *Conference sponsors.*

	Sponsorship level					
Year	Unspecified	S-rated general	T-rated bronze	H-rated silver	V-rated gold	ZR-rated platinum
2003	Smithers (printing)					
2004	Abaqus, Cooper, Goodyear					
2005	Abaqus, GM, Goodyear					
2006	Abaqus, MTS, Hankook, Goodyear					
2007	MTS, DSS Simulia, Smithers					
2008		Smithers, LMS		DSS Simulia		
2009		Smithers, Hamamatsu		DSS Simulia		
2010		MTS, Smithers	DSS Simulia, Kumho	Hankook		
2011		MTS, Smithers, Nexen	DSS Simulia, Kumho, Yokohama, Hankook			
2012		Bogimac, CenTiRe, Nexen	Kumho, Yokohama		DSS Simulia, ITEC2012	
2013		DSS Simulia, Smithers				
2014				DSS Simulia, Smithers		
2015			Endurica, Smithers	DSS Simulia		
2016			CenTiRe, Smithers	Adaptive, Goodyear	Cooper	
2017		Endurica	Smithers	Adaptive, Goodyear	Kenda, Cooper	
2018			Endurica, Smithers	Goodyear	Cooper, Adaptive	
2019			Endurica, Smithers	BKT, TMSI, Goodyear, Hankook,	Kistler, AND, Cooper, Adaptive	
2020			AND, Smithers	TMSI	Cooper	Endurica

FIG. 21 — *Conference bags.*

and ZR in order of increasing contribution. Table 20 shows the list of conference sponsors. Later, these values were also referred to as General, Bronze, Silver, Gold, and Platinum, with a stipulation that only one Platinum Sponsor would be accepted each year. In 2020, Endurica became the society's first Platinum Sponsor.

To differentiate among the different sponsorship levels, the Marketing Committee has defined a set of benefits sponsors may receive. Although these began primarily with display of sponsor logos in various sizes in the abstract book, they have grown to include banner displays, tables in the conference break room, and complimentary registrations to the conference.

For attendees, probably the most memorable result of sponsorship has been the bags that were provided at registration. Figure 21 shows an example of some of these from the author's collection. ABAQUS was the first sponsor to provide Tire Society bags for the conference, and for several years, it provided these as an in-kind donation.

19 Founders' Biographies

The following are brief biographies of some of The Tire Society's founders.

19.1 Fivel Cecil Brenner

F. Cecil Brenner (as he was known in later years), was a textile chemist who worked at Johnson & Johnson and Chemstrand before joining the National Bureau of Standards in 1965. During World War II, Brenner served as a Second Lieutenant in the 811th Tank Destroyer Battalion and was awarded the Purple Heart with Oak Leaf Clusters. Dr. Brenner received his B.S. in chemistry from Virginia Tech and his M.S. and Ph.D. in polymer chemistry from the Polytechnic Institute of New York.

In 1967, he became head of the Tire Systems Division at the Office of Vehicle Systems Research. While there, he initiated work on Uniform Tire

Quality Grading (UTQG). Around 1967, Dr. Brenner formed the TACT in support of quality standards. In 1971, he moved to NHTSA, where he remained for the rest of his career, as Tire Systems Division chief at the NHTSA Safety Research Laboratory [32].

Recognizing the need for a more formal body for creation of standards and dissemination of technical information about tires, Dr. Brenner presided over the formation of ASTM Committee F-9 on tires and was its first president, also suggesting that the committee start a journal on tires (see Appendix A) [11]. Dr. Brenner was the first vice president and the second president of The Tire Society. He passed away in 1998.

19.2 Daniel Livingston

Daniel Livingston was a physical chemist who worked for Goodyear for many years. During World War II, he served in the Army Air Corps, attaining the rank of Second Lieutenant, and was awarded American Theater Medal and Good Conduct Medal. After the war, he received his Ph.D. from the Brooklyn Polytechnic Institute.

During the period when the journal was published by ASTM F-9, Dr. Livingston was its editor. When ASTM ceased publication of the journal, Dr. Livingston and several of his colleagues at Goodyear incorporated The Tire Society to continue the journal's publication. Dr. Livingston was editor of the journal from its founding until 1982 and in 2006 wrote a five-page history of the society. He passed away in 2013 at the age of 95.

19.3 Frederick J. Kovac

Those who knew him personally generally refer to Fred Kovac as something of a "force of nature." A passionate man who loved to laugh and who dressed ostentatiously, Kovac may have been the person most responsible for the founding and survival of The Tire Society in its early days.

Kovac began his career as a chemist at Firestone and while working there earned a law degree in his spare time [12]. All of Kovac's degrees came from the University of Akron. He joined Goodyear in 1956, eventually rising to the level of vice president of worldwide tire technology [33]. He was instrumental in many of Goodyear's new product releases, including the belted bias tire, the first all-season tires, and the Aquatred [12].

Kovac was a member of TACT and was the founding second vice chairman of ASTM F-09. When The Tire Society was founded, Kovac arranged to have Goodyear print the journal in-house for several years.

He is quoted in his obituary as saying, "You must sell management on technology, convincing them that it's critical to the company" [34]. Kovac encouraged participation by his employees and was responsible for recruiting both David Benko (who became the society's first treasurer

and business manager) and Mechelle Miller (his executive secretary), who supervised local arrangements for the conference for many years. Kovac's last business card at Goodyear included the words "futurist, strategist, and optimist" [35].

Fred Kovac passed away in 1996, shortly after he retired from Goodyear.

19.4 David Benko

David Benko joined Goodyear in 1978 after receiving his Ph.D. in chemistry from the University of Delaware. Dr. Benko began working in research and material development and at the time of this article is still working for Goodyear as a technical fellow.

At the direction of Fred Kovac, Dr. Benko joined The Tire Society in 1981 and was the society's first treasurer and business manager, a position he held for approximately 4 years. During his time with The Tire Society, Dr. Benko served as treasurer, secretary, vice president, and finally president, and he is the only person to have held all four of these offices.

During the period when Goodyear published the journal in house, Dr. Benko ran the society's office from his home (see Appendix C) [20].

19.5 Samuel Kelly Clark

Samuel Clark was one of the most important tire researchers of our time. His research interests included instrumentation for tire measurements from large tire forces and moments to tire–road contact phenomena. He was also the mentor and graduate advisor of at least two Tire Society presidents (John Luchini and Ric Mousseau).

Born in 1924 in Ypsilanti, Michigan, Dr. Clark joined the Navy V-12 College Training Program in 1942 as a lieutenant but did not see active service. He earned his B.S., M.S., and Ph.D. degrees in engineering from the University of Michigan in 1946, 1948, and 1951, respectively. After 5 years working as an engineer in the aircraft and automotive industries, Dr. Clark returned to teaching, first at the Case Institute of Technology in Cleveland and then at the University of Michigan, where he became professor in 1959.

The author of more than 100 journal articles and research reports, Professor Clark edited a monograph in 1971 for the U.S. Bureau of Standards titled "Mechanics of Pneumatic Tires," which is known to generations of tire engineers as "The Clark Book." Dr. Clark was named a fellow of the Society of Automotive Engineers in 1985.

Active both in ASTM F-09 and The Tire Society, Dr. Clark became the society's first secretary and delivered the "invited lecture" (now plenary lecture) at its first conference. Dr. Clark, who passed away in 2005, was awarded the first Tire Society Distinguished Achievement Award in 2009 [36, 37].

19.6 Howard Ray Snyder

Although Howard was neither a founder nor even a member of the society, his contributions as the society's office manager are fundamental. Howard ran The Tire Society office from his home from 1992 to 2009. The extensive records he kept, including a full set *of Tire Science and Technology* journals from 1973 through 2009, paper copies of conference programs, abstract books, calls for papers, keynote addresses, and financial records, form the heart of The Tire Society archives and were essential in compiling this history of the society.

Howard was born in Pennsylvania in 1931 and attended Punxsutawney High School. Following service in the U.S. Army, he graduated cum laude from Penn State University with a B.S. in business administration. He became a certified public accountant in 1962, moving to Akron in 1966 as controller of the construction division of Babcock & Wilcox. After retiring from B&W, Howard became active in the American Society of Home Inspectors. It was in retirement that Howard began managing the society's business office. At the time of this writing, a Google search for The Tire Society still shows its address as Howard's former home in Cuyahoga Falls [24, 38].

Howard Snyder passed away in March 2019.

20 Historical Materials and Archive

To date, The Tire Society does not have any formal archive for safe conservation and study of historically relevant materials. Work is underway to aggregate and catalog the multiple separate sources of information and to find a permanent home for them.

In compiling this history of the society, the author reviewed the following records:

- Paper copies of *Tire Science and Technology*: The set of journals that Marion Pottinger accumulated and gave to the author includes all but 5 of the 151 journal issues from 1973 to 2015. The cover information (not captured in the web archive) contains most of the information about early officers. Information about ASTM F-09 officers and symposia also came from these. Howard Snyder's reference set of journals from 1973–2009 is missing four issues. Interestingly, both sets are missing volume 4 issue 4 and volume 7 issue 3/4.
- Conference trifold programs: Typically, there were three trifolds issued for each conference: a Call for Papers, an Advance Program, and a Final Program. Some of these are shown in Figure 22. Digital scans of many of these were made by Ron Kennedy in 2006 for his 25th anniversary presentation on the history of the society. These documents contain a wealth of information currently not available elsewhere, including the only published lists of Tire Society officers prior to 1989, when the officer list

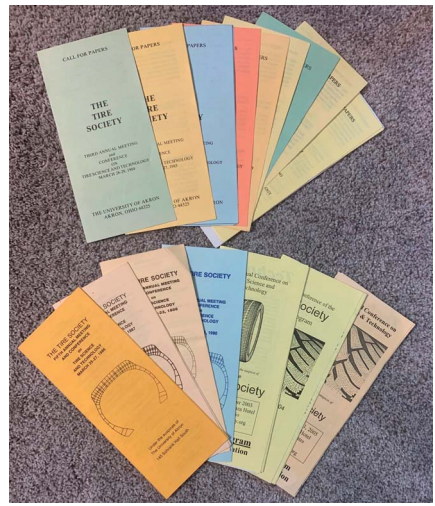


FIG. 22 — *Conference trifolds*.

was first published in the journal, as well as conference schedules, pricing, and information about the banquet. It is not known where the programs Kennedy scanned came from, and the paper copies now appear to be lost. Only digital scans of these currently exist. A separate set of trifolds was kept by Howard Snyder. Scans of these have been added to ones scanned by Kennedy. Currently, the society is missing the following years: 1989, 1993 (have preliminary program), 1995 (have preliminary program), 1999 (have preliminary program), and any trifolds after 2005 (if these were made).

- Conference abstract booklets: David Dryden, John Luchini, and the author each retained copies of conference abstract books, most in digital form. Howard Snyder also retained paper copies of these to 2009 (Fig. 23), which may be scanned to fill the gaps in the digital collection. These books include the abstracts for each paper but do not include Tire Society officers until 1999. Currently, the only missing year is 1982, and it is not known whether an abstract book was published that year.
- Photographs of the conferences and attendees: The Tire Society has literally thousands of photographs taken at the various conferences. Photographers have included Ben Kastein, Tom Fleischman, Shelby Washko, and Joe Banker. The photos exist in three forms:
  - Digitized photos stored as files in the society's Google Drive
  - Digitized photos uploaded to the society's Google Photos folders
  - Paper copies photos of older photos, some of which are scanned and many of which remain to be scanned

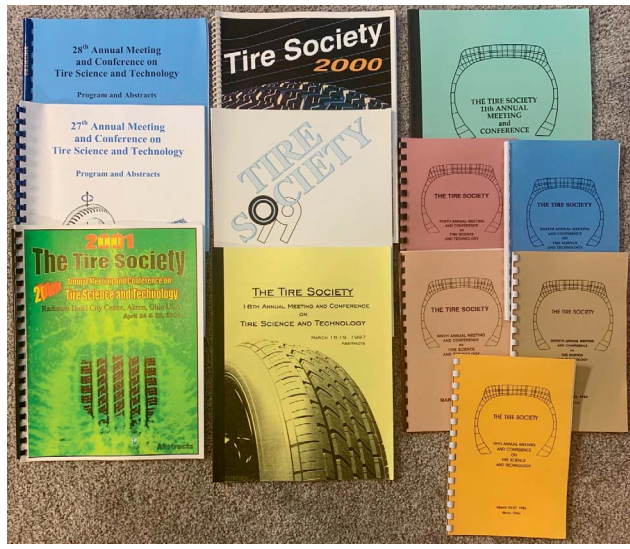


FIG. 23 — *Abstract books.*

Using various contextual clues, the author has personally tagged more than 450 different individuals in the society's Google Photos archive. In this, the author was greatly assisted by work previously done by Tom Fleischman, Bob Wheeler, Ron Kennedy, and Joe Walter to identify those pictured. These photos extend to the first conference and include two ASTM F-09 symposia in 1981. The task of scanning, tagging, and organizing the photos is a massive one that remains to be done (see Figure 24).

- Previously compiled histories of the society: Typically, these are in the form of tables listing the various officers, volunteers, and speakers. The author has

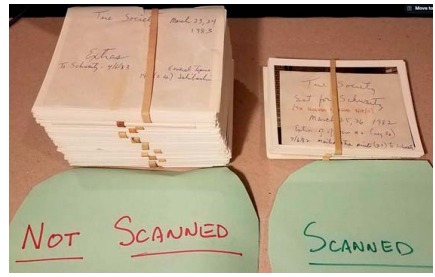


FIG. 24 — *Photos to be scanned.*

aggregated and verified prior materials and added significantly to these tables.

- Oral interviews with early members of the society: It is unfortunate that many important members from the society's early days are now deceased. With them died much useful information about the society's founding and development. It was a true joy for the author to speak with many of those who remain.

The materials mentioned above cannot be considered complete. The author encourages readers of this article to submit stories or copies of any documentary materials about the society to him or to another member of the society's XCOM so that their information can be added to the society's archives.

21 Conclusion

A significant challenge in writing this history is that The Tire Society continues to evolve. In fact, the society still has a few members who were active during the TACT and ASTM F-09 eras. While the author is grateful for these members' willingness to share their experiences, this history must by its nature blur the lines a bit between true history (who, what, when, where, why) and sociology (the study of the development and continuing function of a society). I have tried whenever possible to report only documented facts. However, as a 20+-year member of the society and an active volunteer over most of that time, it is inevitable that I would have certain perspectives on the events that are presented.

I have tried to fairly represent the contributions of all those who have given their time and talents to make The Tire Society what it is today. Any omissions or errors are mine alone and were not intentional.

Considering the history of The Tire Society and its journal over nearly 50 year, it is remarkable that such a volunteer-driven organization has continued to exist. The Tire Society is by its nature a fragile one; dependent on volunteers for its operation and on authors and corporations for the technical information it is charged with encouraging and disseminating.

Over its life, the society has hosted nearly 40 conferences. Its journal has published more than 650 technical articles in more than 170 printed issues. The breadth of information presented is staggering; yet for virtually the author's entire 25-year association with the society the question, "Is The Tire Society still relevant?" has remained a continuing specter.

In an industry built on trade secrets and proprietary information, it remains a hard sell to convince management of the value of presenting fundamental research in a public forum. Yet that very research, and the connections made through this forum, have provided important learning experiences for many of today's tire company technical leaders.

Whether the society will adapt and continue to be relevant over coming years must depend on a new generation of scientists and industry leaders.

Acknowledgments

I thank Bridgestone Americas, my employer, for supporting my continuing participation in The Tire Society and the writing of this article.

In compiling this history, I have been greatly assisted by historical materials compiled by and recollections of David Dryden, Tom Fleischman, Ron Kennedy, William Mars, Bob Pelle, Marion Pottinger, Raouf Ridha, and Bob Wheeler, all of whom graciously provided their guidance and assistance. Additional historical materials came from John Luchini and Daniel Livingston (both now deceased).

Perhaps the most important part of any history is the stories behind it. To that end, personal interviews and recollections are invaluable. Thank you to David Benko, Jozef DeEskinazi, Bill Janowski, Mechelle Miller, Raouf Ridha, Alan Veith, and Joe Walter for taking time to let me interview you and for the contextual information and stories that you provided.

Lastly, The Tire Society would not exist without the support of literally hundreds of volunteer members and their employers. I am grateful to everyone who has given their time and talents in service to the society as officers, authors, and other volunteers. Our society and journal are a lasting tribute to your work.

References

[1] The Tire Society. "About." Available at: https://www.tiresociety.org/about/. Accessed July 15, 2020.

[2] Speno, E. J. "Edward J. Speno Papers." Hofstra University Library Special Collections Department. Available at: https://www.hofstra.edu/pdf/library/libspc_lisi_speno_fa.pdf. Accessed July 16, 2020.

[3] "The Coming Struggle for Auto Safety," *Congressional Record, Proceedings and Debates of the 89th Congress Second Session*, Vol. 112, Pt. 3, 1966, pp. 3528–3532.

[4] "Senator Edward J. Speno Dies; Favored Parochial School Aid," *New York Times*, February 18, 1971, p. 38.

[5] "Setting Standards to Save Lives on the Highway," *Congressional Record, Proceedings and Debates of the 88th Congress Second Session*, Vol. 110, Pt. 8, 1964, pp. 10469–10472.

[6] "S. 1643: A Bill to Provide That Tires Sold or Shipped in Interstate Commerce for Use on Motor Vehicles Shall Comply with Certain Safety and Labeling Regulations," *United States Senate, Hearings Before the Committee on Commerce, 89th Congress First Session,* May–August 1965.

[7] Nader, R., *Unsafe at Any Speed: The Designed-in Dangers of the American Automobile*, Grossman, New York, 1965.

[8] "The Uniform Tire Quality Grading System: A Case Study of the Government Regulatory Process," Report of the National Center for Productivity and Quality of Working Life, spring 1987, p. 15.
[9] "The Uniform Tire Quality Grading System: A Case Study of the Government Regulatory Process," National Center for Productivity and Quality of Working Life, 1978.
[10] Estrada, L., "F. Cecil Brenner, 79, Dies," *Washington Post*, March 23, 1998.
[11] Livingston, D. I. "Early History of Tire Society." Unpublished manuscript, 2006.
[12] Walter, J. D., interview by James E. McIntyre III, June 27 and July 17, 2020.
[13] Veith, A. G. interview by James E. McIntyre III, July 16, 2020.
[14] ASTM, "Committee F-09 Scope." Available at: https://www.astm.org/COMMIT/F09_Fact_Sheet_2015.pdf. Accessed July 20, 2020.
[15] ASTM F1805, "Standard Test Method for Single Wheel Driving Traction in a Straight Line on Snow- and Ice-Covered Surfaces," ASTM International, West Conshohocken, PA, 2020.
[16] "TISB 37: USTMA Definition for Passenger and Light Truck Tires for Use in Severe Snow Conditions." Available at: https://www.ustires.org/product/tisb-37-ustma-definition-passenger-and-light-truck-tires-use-severe-snow-conditions. Accessed July 20, 2020.
[17] "Federal Motor Vehicle Safety Standard No. 139; New Pneumatic Radial Tires for Light Vehicles." Available at: https://www.ecfr.gov/cgi-bin/text-idx?SID=7d443eb75ceba033fed91e90f816b574&node=se49.6.571_1139&rgn=div8. Accessed July 20, 2020.
[18] "UNECE R117: Uniform Provisions Concerning the Approval of Tyres with Regard to Rolling Sound Emissions and/or to Adhesion on Wet Surfaces and/or to Rolling Resistance." Available at: https://www.unece.org/?id=39146. Accessed July 20, 2020.
[19] Ridha, R. A., "The Tire Society—Its First 25 Years." Unpublished manuscript, 2006.
[20] Benko, D. A., interview by James E. McIntyre III, July 10, 2020.
[21] Ridha, R. A., interview by James E. McIntyre III, August 17, 2020.
[22] DeEskinazi, J., e-mail conversation with James E. McIntyre III, August 27, 2020.
[23] Mars, W. V., e-mail conversation with James E. McIntyre III, August 24, 2020.
[24] Miller, M. S., interview by James E. McIntyre III, September 1, 2020.
[25] Pelle, R. G., "Emails from Bob Pelle," 1, August 2020. Available at:
[26] Trinko, M. J., "Letter to the ACS Rubber Division," 1995. Tire Society Treasurer's Records.
[27] Dryden, D. M., "2019 Analytics (Report to XCOM on 2019 Tire Society Conference Attendance)," October 2019. Tire Society Archives.
[28] Tire Society Executive Committee, "XCOM_1129_minutes RLJ Revised.doc," November 2012. Tire Society Archives.
[29] Tire Society Executive Committee, "2019 Conference Budget as Approved," March 2019. Tire Society Archives.
[30] "Tire Society Constitution." 2002. Available at: https://www.tiresociety.org/constitution/. Accessed August 6, 2020. Tire Society Archives.
[31] SAE International, "J670 Vehicle Dynamics Terminology," January 24, 2008. Available at: https://www.sae.org/standards/content/j670_200801/. Accessed August 20, 2020.
[32] Ridha, R. A., "In Memory of F. Cecil Brenner," *Tire Science and Technology*, Vol. 26, 1988, pp. 129–130.
[33] Tire Industry Association, "TIA Announces 2016 Hall of Fame Recipients." October 31, 2016. Available at: https://www.tireindustry.org/tia-announces-2016-hall-fame-recipients. Accessed July 24, 2020.
[34] "Kovac, F. J. Obituary," *Tire Business*, November 11, 1996. Available at: https://www.tirebusiness.com/article/19961111/ISSUE/311119985/obituaries. Accessed July 22, 2020.

[35] Ridha, R. A., "In Memory of Frederick J. Kovac," *Tire Science and Technology*, Vol. 25, 1997, p. 76.
[36] "In Memoriam: Sam Clark," *Tire Science and Technology,* Vol. 34, 2006, pp. 218–219.
[37] "Memoir Samuel K. Clark," University of Michigan. Available at: http://faculty-history.dc.umich.edu/faculty/samuel-k-clark/memoir. Accessed August 20, 2020.
[38] "Howard R. 'Sock' Snyder Obituary," August 3, 2019. Available at: https://www.legacy.com/obituaries/punxsutawneyspirit/obituary.aspx?n=howard-r-snyder-sock&pid=193519457&fhid=11933. Accessed September 1, 2020.

Appendices

These three appendices contain texts of unpublished histories of the society. Appendix A was written by Daniel Livingston, presumably around 2006. Appendixes B and C were written by different authors, presumably in 2001. These documents were found in The Tire Society secretaries' records, and their texts are reproduced here exactly, including typographical errors.

Appendix A: Early History of The Tire Society, by Daniel Livingston

I'm happy to be here today to give you a little very personal history of the origin of the Society as well as I can remember it. The predecessor of the Society was TACT, the Technical Advisory Committee for Tires, which was eventually supplanted by ASTM Committee F-9 On Tires that, in turn, led to The Tire Society. TACT was formed by Dr. F. Cecil Brenner, then of the U.S. Bureau of Standards, in response to a mandate of Congress to devise a Uniform Tire Quality Grading System for rating the relative performance of tires so the consumer could have some way to compare them, as there was then no way to make an informed judgment of the many choices of tire brands and tire lines. To my mind, this is still very difficult to do because of the many variables in tire use.

Cecil's background was in textiles, and he was not knowledgeable about tires, but he was trained in science and realized that he needed the input of industrial and academic experts in the various areas in order to develop a grading system. Of course it was also to educate himself and his group then at the Bureau of Standards and later transferred to the National Highway Traffic Safety Administration.

The TACT committee held meetings over the course of several years. My memory is fuzzy on the details of these meetings, having attended only the last ones. I had become interested in the physics of tires, and came across some articles by Walter Bergman of Ford, which led me to call on him. He told me about the TACT committee run by some guy named Cecil Brenner. It turned out

to be the same Cecil Brenner who was a friend of mine at Brooklyn Poly grad school.

There was a lot of resistance to a grading system at that time by most auto and tire companies, but they were wise enough to stay with the project. I was careful to stay out of the politics of the situation, but I think Cecil enjoyed them.

Cecil presided over the formation of ASTM Committee F-9 on Tires and was its first chairman. He wanted to standardize procedures for the tire ratings. He also wanted a journal as a source of tire literature available to everyone in order to supplement the standardization efforts. I was at the time an Associate Editor of *Rubber Chemistry and Technology*, and because of this experience, he suggested that we start a journal on Tires. Goodyear agreed that I could do this. It was behind-the-scenes activity of Fred Kovac, to whom we owe a great deal for our success, who helped in approving Goodyear's participation.

We decided to call the journal *Tire Science and Technology*, and Sam Fielding-Russell of Goodyear designed the artistic cover we still use today. ASTM agreed to the journal as an F-9 publication. At about this time the Rubber Division of the American Chemical Society expressed concern that papers would be diverted from their journal, *Rubber Chemistry and Technology*, but we maintained that the result would be that more papers would be written—which is what eventually happened as the journal became recognized.

In order to receive original papers of high quality, it was necessary to apply high standards, and at the beginning there was a dearth of such submissions. I had little help and editing was a part-time activity so the journal waited until there was a reasonable number of contributions, well refereed and well edited for each issue.

Since it was scheduled to appear quarterly, but was always late, the editor of publications at ASTM became very irritated—never having heard, I suppose, that there is such a thing as an irregular journal (We now say published in four issues per volume rather than quarterly.) ASTM published *Tire Science and Technology* from 1973 through 1978, and then, after many threats, declared it dead. But it hung on. By that time The Tire Society was formed and took over the role of publisher in 1979.

I confess that I conceived the idea of the Society really as a vehicle for publishing the journal. But after reflection, we thought that there was a need for a forum devoted exclusively to tires, and Akron being the center of the tire industry was a logical place to hold such meetings. Alan Gent had just formed the Adhesion Society by holding an inaugural meeting at the University of Akron during intercession at which a slate of officers was ratified. We emulated that procedure. I wrote the application to incorporate the Society as a not-for-profit Ohio corporation, and we proposed a slate of officers who were the first trustees. The affiliation with the university would be prestigious and help attract people to an inaugural meeting. Besides, the University wanted to participate in community activities, and there would be no charge for the meeting room

available during intercession. Alberta Hensley was our liaison with the university and helped a great deal in getting us organized.

There was good attendance at the first meeting. The attendees, designated as members of the Society, ratified the slate of officers. Harold Schwartz of DuPont was first President, Sam Clark of the University of Michigan, Secretary, and I was Editor. Harold cautioned about suppliers to the industry dominating The Tire Society as they had the Rubber Division. Alan Gent suggested making the meeting registration include the banquet, membership, and subscription to the journal for the following year, as a package deal, so that each attendee would get all the benefits. That way there would also be a subscription base for the journal. Ample break periods were built into the program so that people could socialize. So they would stay for the full program rather than get an early plane out, a special Plenary Lecture was included on the afternoon of the last day. The strategy has worked well. Dave Benko of Goodyear was a great help in organizing those first meetings. I remember Fred Kovac as a great friend of the Society. He helped get Keynote and Banquet Speakers and facilitated everything. To keep it light, he once invited Gerry Faust, football coach at the University, to be banquet speaker. I won't forget that just before the banquet he asked me, "What do you want me to talk about?"

But what of the journal? We still performed all of the redacting chores, and for a while Goodyear was gracious enough to print it at no charge. Mort Leggett, Editor of Goodyear publications was kind enough to help for a while. There was not enough money from the registration fee to cover the cost of professional printing, and we didn't want to raise it too much, partly because most of the early attendance was by engineers from the local tire companies (Fred Kovac sent about 60). We didn't want to discourage that. Now that the Society and journal are well known it's much easier to raise the registration, and members still get a lot for their money.

Contributions to the journal were increasing with the reputation of the society and the increasing international attendance. To keep up, I organized a Publications Committee headed by Floyd Conant of Firestone to do the editing, and Raouf Ridha of Goodyear took over the refereeing chores. The Society could now afford the services of Lancaster Press, an experienced producer of technical publications. I asked Raouf to stand for the position of Editor and I retired from the job. Two more of the editors have come from that initial committee, Joe DeEskinazi and the present editor Farhad Tabbador, and they have all done an excellent job. Many others helped.

For me the creations of the journal and the Society.have been an intertwined experience, and I've presented them from the point of view of my own participation in the trials and tribulations of both. As you see, lot happened in those early days.

Appendix B: A Brief History of The Tire Society

The Tire Society, Incorporated, is an Ohio not-for-profit corporation with worldwide membership whose charter is to increase and disseminate knowledge as it pertains to the science, and technology of tires. It hosts an annual Conference showcasing original papers and plenary reviews, in the field of Tire Science. In addition, it edits and distributes a critically reviewed, authoritative, quarterly journal, *Tire Science and Technology.*

The history of The Tire Society must begin with mention of the Technical Advisory Committee for Tires (TACT.) This group was formed by Dr. F. Cecil Brenner, then of the U.S. Bureau of Standards, when the U.S. Congress mandated the UTQG standards. Cecil was well trained in science and realized that he needed to rapidly learn about tires in order to develop a grading system. He assembled a group of academic and industrial experts to form the TACT. Although there was much resistance to creating a grading system, the experts from the tire and automobile industries stayed with the project to help educate Cecil, others at the U.S. Bureau of Standards, and thus tire consumers. When the work, and Cecil, were transferred to the National Highway and Traffic Safety Administration (NHTSA), Cecil wanted standardized procedures supported by industry. The TACT also realized the need for an educational journal as a reference source of tire literature to supplement the standards.

The Tire Society history then continues with the formation of the ASTM Committee F-9 on Tires. This group was formed under ASTM because that society had experience and procedures for developing standards and testing methods accepted by government, and by affected industries. ASTM also agreed to publish the technical presentations from symposia of Committee F-9. From this beginning, *Tire Science and Technology* evolved into a quarterly journal. The Journal was published from 1973 through 1978 by the ASTM.

On a practical basis, the Society was functioning before it was legally incorporated. After many threats, ASTM withdrew its support of the Journal in 1978. The Editor of the journal, Daniel Livingston, conceived the idea of a separate Society exclusively to continue the publication. The original Society formation vote was taken during a short "recess" of an ASTM Committee F-9 meeting in 1978. The Tire Society began publishing the Journal in 1979. Supported through the efforts of Fred Kovac, Daniel continued as the Editor, with Goodyear as the printer, and The Tire Society as the formal publisher.

After a few years of separation, presentations from the Committee F-9 symposia were not sufficient to supply the Journal with articles. The trustees of The Tire Society decided to hold a forum devoted exclusively to tires. Emulating the recent formation of The Adhesion Society by Alan Gent at the University of Akron, The Tire Society applied for incorporation as a not-for-profit Ohio Corporation. The Society would be affiliated with the University of

Akron so that its prestige would help attract people to the inaugural Conference on Tire Science and Technology.

In 1982, for their inaugural meeting, The Tire Society Conference was held on the campus of the University of Akron. With most tire companies headquarters in the Akron area, there was a large membership and the costs were kept low because meeting site was donated at no cost by the University. There was also significant cost underwriting from the tire companies. Alan Gent suggested combining membership with the meeting registration, banquet, and subscription to the Journal for the following year, as a package deal. Not only would each attendee get all the benefits, this would also increase the subscription base for the journal.

Other Conference strategies were designed to increase interaction among the participants. Ample break periods were built into the program so that people could discuss the presentations and implications, or just socialize. To encourage out-of-town members to stay for the full program the papers were not grouped by topic and a special Plenary Lecture was included late on the last day.

From 1982 until 1997 the Conference continued to be held at the University of Akron during their spring break. Then in order to better accommodate industry schedules, the date was changed to the end of April and the venue was changed to an Akron hotel, because the University was not able to supply appropriate meeting space while classes were in session.

Although the costs to the Society were much higher, the member response was very positive and from 1998-2001 the Conference on Tire Science and Technology was held in an Akron hotel. Membership fees had to be increased to cover the conference costs, but the number of members declined.

Therefore, it was decided to move the 2002 Conference to September to take advantages of synergies available from the International Tire Exhibition and Conference (ITEC) that was being held in Akron at that time.

(Editor's note: The original document also includes a table of conference Keynote, Plenary, and After Dinner Speakers and a list of program Chairs from 1982 to 2001.)

Appendix C: A Brief History of The Tire Society

The Tire Society, Incorporated, is an Ohio not-for-profit corporation with worldwide membership whose charter is to increase and disseminate knowledge as it pertains to the science, and technology of tires. It hosts an annual Conference showcasing original papers and plenary reviews, in the field of Tire Science. In addition, it edits and distributes a critically reviewed, authoritative, quarterly journal, *Tire Science and Technology.*

ASTM Committee F-9 on Tires

The Society history should begin with mention of the ASTM Committee F-9 on Tires, which was formed through the efforts of F. Cecil Brenner when the U.S. Government initiated the UTQG standards. This committee of ASTM developed standard testing methods from those in use by the tire industry. These ASTM standards became the basis for UTQG standards.

ASTM agreed to publish the presentations from symposia of the Committee F-9, as an STP. In order to facilitate more open discussion during the symposia, it was decided that only printed papers submitted for technical review after the symposia would be included for publication. However, the delays incurred for technical review and publication by ASTM made the papers useful for archival purposes and it was decided to publish them in a quarterly journal format. Thus, in 1973, the journal, *Tire Science and Technology* began publication as a quarterly journal.

The Journal of Tire Science and Technology

The Journal was published from 1973 through 1978 by the ASTM. A small ASTM logo in the lower left corner of the cover, was in approximately the same position as it would be for ASTM's more typical STP booklets. However, during 1977-78 ASTM decided that they no longer wanted to publish a Journal for Committee F-9. It was determined that a new group must be formed to publish the Journal or it would cease to exist.

The Journal has been printed by "The Tire Society" since the first issue (1-2) of volume 7, 1979. This is the first issue of the Journal that indicates it was published by "The Tire Society." The Journal Logo became a wire-spoked wheel and tire, that matched the dimensions of the ASTM logo on the earlier issues of the Journal. The last journal for 1978 has an ASTM logo, while the first journal for 1979 used a Tire Society logo. However, it appears that the publication of the Journal was converted before the necessary steps were taken for society's legal existance.

The Tire Society, Incorporated

On a practical basis, the Society was functioning before it was legally official. At an ASTM Committee F-9 meeting in 1978, Daniel Livingston announced that The Tire Society was being formed to publish the Journal because ASTM did not want to support the Journal and many of the members wanted to continue it. A Constitution and Bylaws were drafted and circulated among Committee F-9 members. The Society formation vote taken in 1978 during a short "recess" of the ASTM Committee F-9 meeting. The vote among the Committee F-9 members was favorable, and the Society was thus organized by the end of the Fall 1978 meeting of ASTM Committee F-9. At the time of the vote, the organization was not legally processed by the

State, but the members needed to "establish" the society so they could use The Tire Society name for the 1979 issues of the Journal.

The Articles of Incorporation filed and recorded with the Secretary of State Ohio are dated April 1, 1980. The registration with the US Copyright office shows an effective registration date of Nov 8, 1982. In the title block of that form the issue date show is Vol 8 No. 3&4 dated July-Dec 1980. Clearly, the filing with the Copyright office was done on a delayed basis.

The Conference on Tire Science and Technology

After a few years of separation, presentations from the Committee F-9 symposia were not sufficient to supply the Journal with articles. It was decided that The Tire Society should hold it's own Conference on Tire Science and Technology.

In 1982, for their inaugural meeting, The Tire Society Conference was held on the campus of the University of Akron. The costs were kept low to encourage attendence. The meeting site was donated at no cost by the University because it was scheduled during their spring break. There was significant cost underwriting from the local tire companies and thus Conference attendence included full Society membership and a subscription to the Journal.

From 1982 until 1997 the Conference continued to be held at the University of Akron in March, during their spring break. For several years the Society had requested the CEO of Bridgestone to be our keynote speaker, but the Conference date always conflicted with another Bridgestone function held in the spring. So in 1998, the date was changed to the end of April and Mr. Kazaki agreed to be the Keynote speaker. The venue was changed to an Akron hotel because the University was not able to supply appropriate meeting space while classes were in session.

Although the costs were much higher the member response was very positive, and from 1998-2001 the Conference on Tire Science and Technology was held in a hotel during the end of April. Membership fees were increased to cover the conference costs, but the number of members declined. It was decided to move the 2002 Conference to September to take advantages of synergies available from the International Tire Exhibition and Conference (ITEC) that was being held in Akron at that time.

(Editor's note: The original document also includes a table of conference Keynote, Plenary, and After Dinner Speakers and a list of program Chairs from 1982 to 2001 and a partial table of Tire Society Officers from 1979 to 2001.)