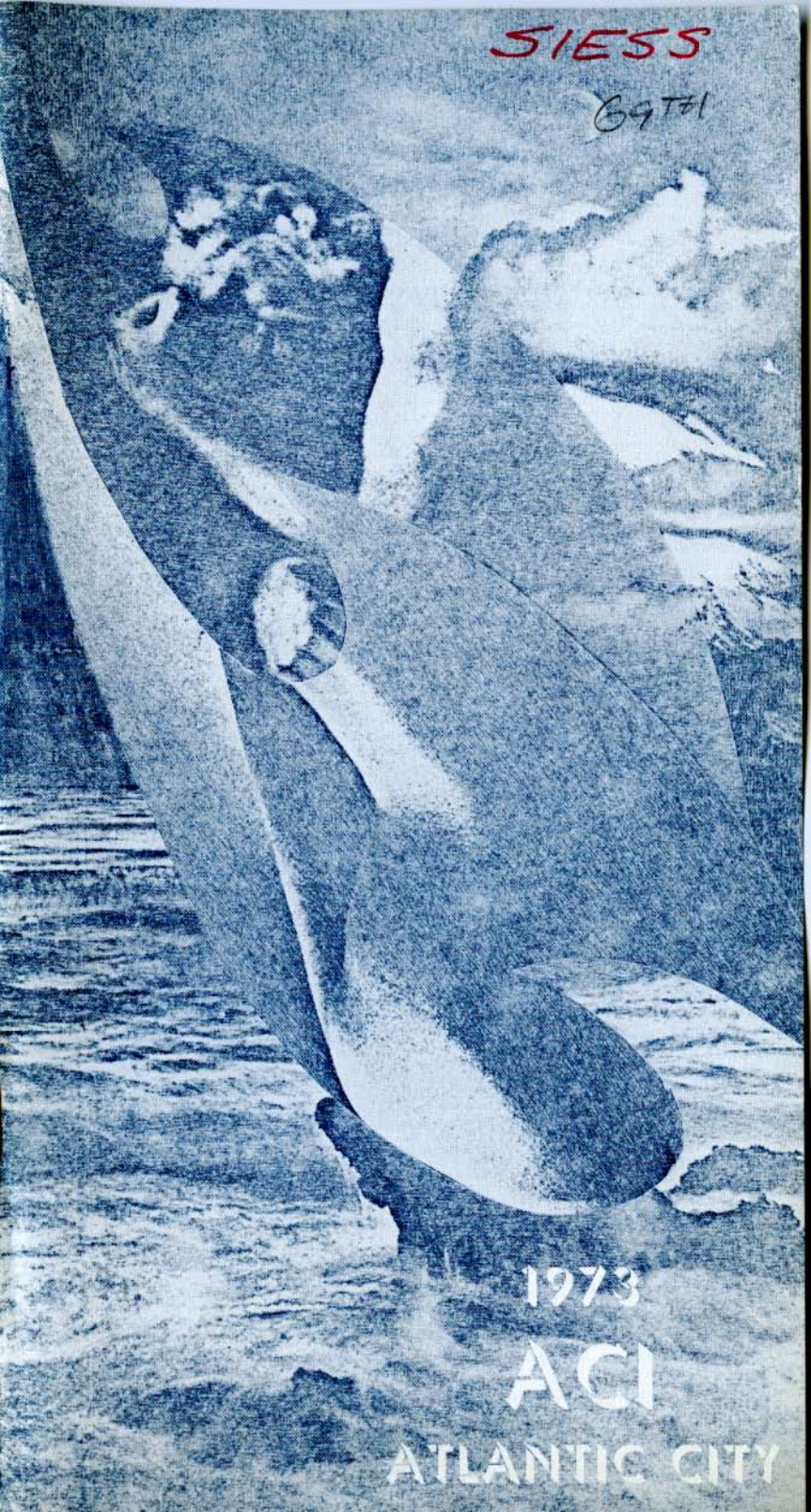


SISS

69TH



1973

ACI

ATLANTIC CITY

# PROGRAM

## 69th ANNUAL CONVENTION

MARCH 5-9, 1973

### ATLANTIC CITY, NEW JERSEY

Registration fees cover attendance at all ACI technical and educational committee meetings, general sessions, and symposia.

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#### special events

**educational-technical exhibits** . . . . Tuesday through Thursday in the English Lounge and Stair Hall.

**chapter forum** . . . . Thursday, 7:00 p.m., in the Garden Room. An informal roundtable on chapter activities and organization.

**"concrete mixer" social hour** . . . . Wednesday, 6:30 to 8:00 p.m., in the Pennsylvania 2. Wear your badge.

**awards luncheon and new officer installation** . . . . Thursday, 12:15 p.m., in the Vernon Room. Good food and drink, an exciting speaker, and multi-media presentations combined into a new format. Get your ticket early!

**publications display** . . . in the English Lounge. All the current ACI publications are there. Orders are taken at the Registration Desk in the Stair Hall.

**Managua Earthquake — A Re-Evaluation of Our Design Philosophy** . . . Presented by Mark Fintel, Chairman, ACI Committee 442, and Director, Engineering Design Services Department, Portland Cement Association, Skokie, Illinois. Thursday, 6:00 p.m., in the Rutland Room.

#### breakfasts (by invitation only):

**tuesday, march 6, 7:00 a.m.**  
breakfast for newly appointed chairmen of technical committees. Rowsley Room.

**tuesday, march 6, 7:00 a.m.**  
breakfast for program participants in Productivity in Construction and the General Session. Bakewell Room.

**wednesday, march 7, 7:00 a.m.**  
breakfast for program participants in Research on Plain and Reinforced Concrete; and Corrosion of Metals in Concrete. Bakewell Room.

**thursday, march 8, 7:00 a.m.**  
breakfast for program participants in Durability of Concrete; Basic Mechanics of Shear Transfer; Evaluating the Strength of Concrete — Methods and Their Significance; and Abeles Symposium on Fatigue of Concrete. Bakewell Room.

**friday, march 9, 7:00 a.m.**  
breakfast for program participants in Formwork for Concrete; Behavior and Design of Beams Subjected to Shear; and Polymers in Concrete. Bakewell Room.



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\*American Concrete Institute  
P. O. Box 4754  
Detroit, Michigan 48219

program

**Monday, March 5**

9:00 a.m. - 10:00 p.m.  
**Technical, educational, and  
administrative committee meetings**

**Tuesday, March 6**

9:00 a.m. - 10:00 p.m.  
**Technical, educational, and  
administrative committee meetings**

1:00 p.m. - 6:00 p.m.  
**Exhibits Open** English Lounge & Stair Hall

2:30 p.m. - 5:30 p.m.  
**Productivity in Construction (ACI New Jersey  
Chapter/Building Contractors Association  
of New Jersey)** Rutland Room

7:00 p.m. - 10:30 p.m.  
**OSHA Symposium** Pennsylvania 1

**Wednesday, March 7**

8:30 a.m. - 12:00 noon  
**General Session** Pennsylvania 1

10:00 a.m. - 6:00 p.m.  
**Exhibits Open** English Lounge & Stair Hall

2:30 p.m. - 5:30 p.m.  
**Research on Plain and Reinforced Concrete  
(Committee 115)** Pennsylvania 3

2:30 p.m. - 5:30 p.m.  
**Corrosion of Metals in Concrete  
(Committee 222)** Pennsylvania 1

2:30 p.m. - 5:30 p.m.  
**Technical and educational committee meetings**

6:30 p.m. - 8:00 p.m.  
**Concrete Mixer** Pennsylvania 2

**Thursday, March 8**

9:00 a.m. - 12:00 noon  
**Durability of Concrete  
(Committee 201)** Pennsylvania 1

9:00 a.m. - 12:00 noon  
**Basic Mechanics of Shear Transfer  
(Committee 426) (first session)** Rutland Room

9:00 a.m. - 10:00 p.m.  
**Technical and educational committee meetings**

10:00 a.m. - 6:00 p.m.  
**Exhibits Open** English Lounge & Stair Hall

12:15 p.m.  
**Awards Luncheon** Vernon Room

2:30 p.m. - 5:30 p.m.  
**Abeles Symposium on Fatigue of Concrete  
(Committee 215)** Rutland Room

2:30 p.m. - 5:30 p.m.  
**Evaluating the Strength of Concrete —  
Methods and Their Significance  
(Committee 214)** Pennsylvania 1

6:00 p.m.  
**Exhibits Close**

6:00 p.m.  
**Managua Earthquake — A Re-Evaluation  
of Our Design Philosophy**

7:00 p.m. - 10:00 p.m.  
**Chapter Forum** Garden

**Friday, March 9**

9:00 a.m. - 12:00 noon  
**Formwork for Concrete  
(Committee 347)** Pennsylvania 1

9:00 a.m. - 12:00 noon  
**Polymers in Concrete  
(Committee 548)** Pennsylvania 2

9:00 a.m. - 12:00 noon  
**Behavior and Design of Beams Subjected  
to Shear (Committee 426)  
(second session)** Pennsylvania 3

12:00 noon  
**CONVENTION CLOSES**

## committee meetings

Be sure to check the bulletin board for last minute changes or added meetings.

### Sunday, March 4 9:00 a.m. to 12:00 noon

committee	meeting room
— Planning Committee	Tower 1333

### Monday, March 5 9:00 a.m. to 12:00 noon

— General Activities Committee	Room 1344
114 Research and Development	Room A
209 Creep and Shrinkage in Concrete	Derbyshire
302 Concrete Floor Finishes	Rowsley
304 Measuring, Mixing, Transporting, and Placing Concrete	Navajo
313 Concrete Bins and Silos	Bakewell
318 Subcommittee H, Shear and Torsion	Pavilion
532 Lightweight Concrete Masonry	Room 1332
533 Precast Panels	West
— ANSI Committee A10, Subcommittee 17, Concrete Construction Safety	Library

### 2:30 p.m. to 5:30 p.m.

— General Activities Committee	Room 1344
— Specifications Review Committee	Rowsley
313 Concrete Bins and Silos	Bakewell
421 Design of Reinforced Concrete Slabs	Viking Theatre
423 Prestressed Concrete	Room A
439 High-Strength Reinforcement in Concrete	Library
504 Joint Sealants	Mandarin
515 Coatings for Concrete	Navajo
517 Accelerated Curing of Concrete at Atmospheric Pressure	Pavilion
533 Precast Panels	West

### 7:00 p.m. to 10:00 p.m.

— Board Committee on International Activities	Rowsley
224 Cracking	Viking Theatre
313 Concrete Bins and Silos	Bakewell
423 Prestressed Concrete	Room A
442 Response of Buildings to Lateral Forces	Mandarin
515 Coatings for Concrete	Navajo
516 High Pressure Steam Curing	Garden
531 Concrete Masonry Structures	Library
533 Precast Panels	West
544 Fiber-Reinforced Concrete	Derbyshire
547 Refractory Concrete	Room 1332

## Tuesday, March 6 9:00 a.m. to 12:00 noon

committee	meeting room
— Board of Direction	Tower 1337
— TAC ad hoc group on Slab Design Aids	Rowsley
211 Proportioning Concrete Mixes	Derbyshire
313 Concrete Bins and Silos	Bakewell
315 Detailing Reinforced Concrete Structures	Garden
316 Construction of Concrete Pavements and Bases	Room 1344
318 Subcommittee F, Serviceability	Navajo
318 Subcommittee L, Prestressed Concrete	Tower 1337
350 Sanitary Engineering Structures	Room 134
351 Foundations for Equipment and Machinery	Library
352 Joints and Connections in Monolithic Concrete Structures	Pavilion
354 Design Practice	Room 1332
444 Models of Concrete Structures	Viking Theatre
E-601 Seminars and Workshops	Room A

### 2:30 p.m. to 5:30 p.m.

PRODUCTIVITY IN CONSTRUCTION (Sponsored by the ACI New Jersey Chapter and the Building Contractors Association of New Jersey) See Page 11 Rutland

— Board of Direction	Tower 1337
118 Use of Computers	West
213 Lightweight Aggregates and Lightweight Aggregate Concrete	Garden
214 Evaluation of Results of Tests Used to Determine the Strength of Concrete	Library
316 Construction of Concrete Pavements and Bases	Room 1344
318 Subcommittee A, General Building Code	Bakewell
318 Subcommittee E, Analysis and Strength Requirements	Rowsley
318 Subcommittee I, Slab Systems	Viking Theatre
336 Combined Footings and Pier Foundations	Derbyshire
340 Ultimate Strength Design Handbook	Tower 1333
352 Joints and Connections in Monolithic Concrete Structures	Pavilion
435 Deflection of Concrete Building Structures	Room 134
438 Torsion	Navajo
E-601 Seminars and Workshops	Room A

### 7:00 p.m. to 10:00 p.m.

OSHA SYMPOSIUM AND PANEL DISCUSSION (Sponsored by ACI-TAC Task Force—Construction Standard for Buildings) See Page 12 Pennsylvania 1

118 Use of Computers	West
120 History of Concrete	Pavilion
207 Mass Concrete	Tower 1337
213 Lightweight Aggregates and Lightweight Aggregate Concrete	Garden
215 Fatigue of Concrete	Room 1344
222 Corrosion of Metals in Concrete	Room 134
307 Reinforced Concrete Chimneys	Rowsley
318 Subcommittee D, Details and Development of Reinforcement	Room 1332
318 Subcommittee G, Flexure and Axial Loads	Room A
318 Subcommittee J, Footings	Viking Theatre
340 Ultimate Strength Design Handbook	Tower 1333
438 Torsion	Navajo
512 Precast Structural Concrete	Bakewell
531 Concrete Masonry Structures	Library

**Wednesday, March 7 8:30 a.m. to 12:00 noon**

GENERAL SESSION See Page 14 Pennsylvania 1

**2:30 p.m. to 5:30 p.m.**RESEARCH ON PLAIN AND REINFORCED CONCRETE  
(Sponsored by ACI Committee 115) See Page 16  
Pennsylvania 3CORROSION OF METALS IN CONCRETE  
(Sponsored by ACI Committee 222) See Page 18  
Pennsylvania 1

committee		meeting room
117	Tolerances	Room 134
212	Admixtures	Bakewell
216	Fire Resistance and Fire Protection of Structures	Garden
301	Specifications for Structural Concrete	Room 1344
303	Architectural Concrete	Tower 1333
309	Consolidation of Concrete	Rowsley
318	Standard Building Code	Viking Theatre
325	Structural Design of Concrete Pavements for Highways and Airports	Tower 1337
334	Concrete Shell Design and Construction	Library
348	Structural Safety	Derbyshire
548	Polymers in Concrete	Navajo
E-704	Enchiridia — Building Code	West

**Thursday, March 8 9:00 a.m. to 12:00 noon**DURABILITY OF CONCRETE (Sponsored by ACI Committee 201) See Page 19  
Pennsylvania 1BASIC MECHANICS OF SHEAR TRANSFER  
(Sponsored by ACI Committee 426)  
(First Session) See Page 20  
Pennsylvania 3

committee		meeting room
116	Nomenclature	Mandarin
222	Corrosion of Metals in Concrete	Room 134
311	Inspection of Concrete	Room 1344
318	Standard Building Code	Viking Theatre
332	Residential Concrete Work	Bakewell
349	Criteria for Nuclear Containment Vessels	Garden
356	Industrialized Concrete Construction	Navajo
437	Strength Evaluation of Existing Concrete Structures	Library
506	Shotcreting	Rowsley
523	Insulating and Cellular Concretes	Derbyshire
546	Repair of Concrete	Tower 1337
E-701	Enchiridia — Materials	Room 1332
E-702	Enchiridia — Structural Design	Tower 1333

**2:30 p.m. to 5:30 p.m.**ABELES SYMPOSIUM ON FATIGUE OF CONCRETE  
(Sponsored by ACI Committee 215)  
See Page 21  
RutlandEVALUATING THE STRENGTH OF CONCRETE —  
METHODS AND THEIR SIGNIFICANCE  
(Sponsored by ACI Committee 214)  
See Page 22  
Pennsylvania 1

—	Board Committee on Chapter Activities	Garden
201	Durability of Concrete	West
223	Expansive Cement Concretes	Mandarin
318	Standard Building Code	Viking Theatre
347	Formwork for Concrete	Library
356	Industrialized Concrete Construction	Navajo
408	Bond Stress	Rowsley
523	Insulating and Cellular Concretes	Derbyshire
546	Repair of Concrete	Tower 1337
E-703	Enchiridia — Construction	Tower 1333

**6:00 p.m.**MANAGUA EARTHQUAKE — A RE-EVALUATION  
OF OUR DESIGN PHILOSOPHY  
Rutland**7:00 p.m. to 10:00 p.m.**

201	CHAPTER FORUM	Garden
223	Durability of Concrete	West
318	Expansive Cement Concretes	Mandarin
345	Standard Building Code	Viking Theatre
347	Concrete Bridge Decks	Room 134
426	Formwork for Concrete	Library
443	Shear and Diagonal Tension	Room 1344
503	Concrete Bridge Design	Navajo
	Adhesives for Concrete	Rowsley

Friday, March 9

9:00 a.m. to 12:00 noon

FORMWORK FOR CONCRETE (Sponsored by  
ACI Committee 347) See Page 23 Pennsylvania 1

POLYMERS IN CONCRETE (Sponsored by ACI  
Committee 548) See Page 24 Pennsylvania 2

BEHAVIOR AND DESIGN OF BEAMS SUBJECTED  
TO SHEAR (Sponsored by ACI Committee 426)  
(Second Session) See Page 25 Pennsylvania 3

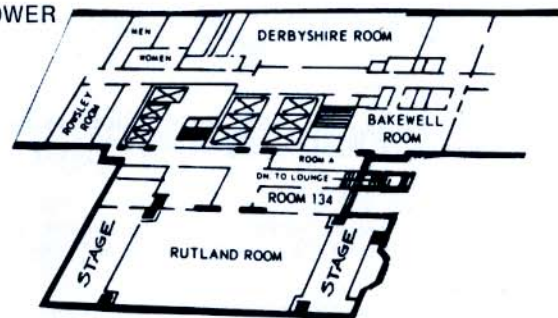
committee  
333 Composite Construction

meeting room  
Library

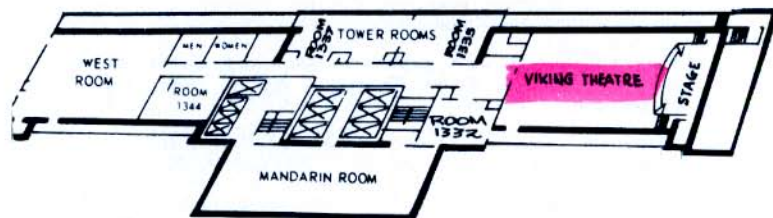
## FLOOR PLANS

### FLOOR PLANS - Haddon Hall

#### FIRST FLOOR TOWER



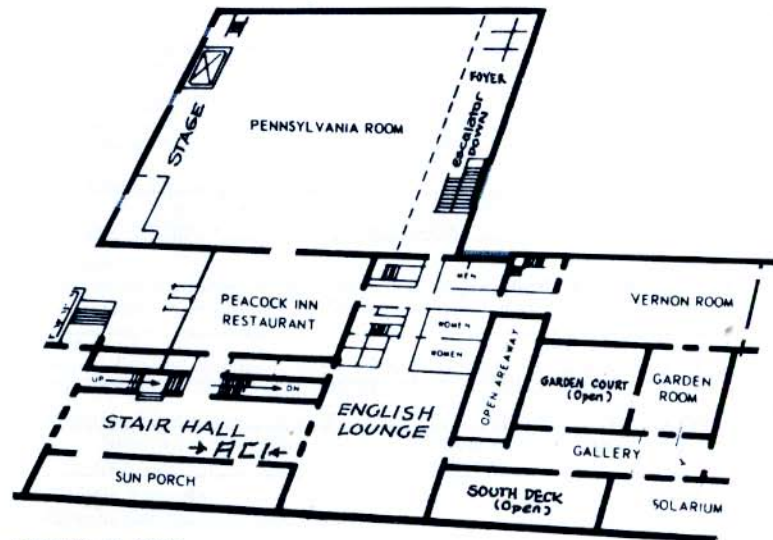
#### TOWER FLOOR



#### FIFTEENTH FLOOR

NAVAJO ROOM PAVILION ROOM

#### LOUNGE FLOOR - ACI Registration



#### LOBBY FLOOR

LIBRARY ROOM





**WEDNESDAY, MARCH 7, 8:30 a.m.**

**general session**

*Pennsylvania 1*

**Session Chairman:** Louis Hajdu, president, ACI New Jersey Chapter, and president, Louis Hajdu, Inc., Alpha, New Jersey

**Presidential Address**

Edward Cohen, president, ACI, and partner, Ammann & Whitney, Consulting Engineers, New York, New York

**Presentation of Delmar L. Bloem Distinguished Service Awards**

**Introduction**

Robert E. Philleo, vice-president, ACI, and chief, Concrete Branch, Office, Chief of Engineers, Washington, D.C.

**Presentation of awards** by Mrs. Delmar L. Bloem

**Awardees**

M. DANIEL VANDERBILT

First Chairman of ACI Committee 104, Preparation of Notation for Concrete, from March 1968 through March 1972; responsible for successfully guiding the creation of a standard which brings order to the systems of concrete notation and for the remarkable degree of international cooperation.

EDWARD COHEN

Chairman of ACI Committee 318, Standard Building Code, from March 1964 through March 1971; responsible for leading the eight-year task of revision of ACI 318-63, producing 318-71. Mr. Cohen also served as the first Chairman of Committee 340, Ultimate Strength Design Handbook, from 1958 to 1967 and co-authored with Noel Everard the interim publication, "Ultimate Strength Design of Reinforced Concrete Columns," SP-7.

GEORGE F. LEYH

Secretary of ACI Committee 318, Standard Building Code, from 1965 through March 1971 when he became chairman; responsible for much of the organizational and administrative work and rewriting involved in the revision of ACI 318-63 to produce 318-71. Mr. Leyh also served as the first Chairman of Committee 545, Concrete Railroad Ties from 1967 to 1971.

**PROGRAM SESSION:**

**New Jersey 1972 Concrete Award Program Winner**

Featuring the design and construction of the Schering Corporation Office Building. The awards program is sponsored jointly by the ACI New Jersey Chapter and the New Jersey Ready Mixed Concrete Association.

**Introduction**

Ellis Vieser, secretary-treasurer and past president, ACI New Jersey Chapter, and general manager, South Jersey Concrete Pipe Company, Inc., Hammonton, New Jersey

**Speakers**

Werner C. Sturm, Severud-Perrone-Sturm-Bandel, New York, New York  
Michael Keselica Jr., Skidmore, Owings & Merrill, New York, New York

**Concrete Structures in North Sea Oil Fields**

Eivind Hognestad, director, Engineering Development Department, Research and Development Division, Portland Cement Association, Skokie, Illinois

**BUSINESS SESSION:**

**Presiding Officer:** Edward Cohen, ACI President

**Revisions to "Building Code Requirements for Reinforced Concrete (ACI 318-71)"**

George F. Leyh, chairman, ACI Committee 318, and associate technical director, Concrete Reinforcing Steel Institute, Chicago, Illinois

**Proposal to Revise the American Concrete Institute Bylaws**

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**WEDNESDAY, MARCH 7, 2:30 p.m.**

research in progress on plain and reinforced concrete

(Brief and confidential unpublished reports)

*Pennsylvania 3*

**sponsored by ACI Committee 115**

**Session Chairman:** Joseph H. Walker, chairman, Committee 115, and vice-president for research and development, Portland Cement Association, Skokie, Illinois

**Secretary:** Herbert K. Cook, secretary, Committee 115, and vice-president of engineering, Master Builders, Cleveland, Ohio

**Full Scale Testing of a Prestressed Concrete Bridge**

Robert M. Barnoff, professor of civil engineering, The Pennsylvania State University, University Park, Pennsylvania

**Further Studies of Double-Punch Test for Tensile Strength of Concrete**

T. A. Colgrove, senior student, Department of Civil Engineering, Lafayette College, Easton, Pennsylvania; and W. F. Chen, associate professor, Department of Civil Engineering, Lehigh University, Bethlehem, Pennsylvania

**Polymer-Cement Concrete for Quality Improvement**

Edward G. Nawy, professor of civil engineering; John A. Sauer, professor of materials science; and P. F. Sun, graduate assistant, Department of Civil and Environmental Engineering, Rutgers University, New Brunswick, New Jersey

**Studies of the Fracture of Concrete Using High-Speed Photography**

Jitendra K. Bhargava, doctor, Institute of Structural Engineering and Bridge Building, The Royal Institute of Technology, Stockholm, Sweden

**Structural Behavior of a Curved Concrete Box Girder Bridge Model**

A. C. Scordelis, J. G. Bouwkamp, professors of civil engineering; and P. K. Larsen, assistant research engineer, Department of Civil Engineering, University of California, Berkeley, California

**A. J. BOASE AWARD OF THE REINFORCED CONCRETE RESEARCH COUNCIL**

Douglas McHenry has been selected by the Reinforced Concrete Research Council to receive the 1973 Arthur J. Boase Award "... for his outstanding leadership in reinforced concrete research over more than 30 years, for his extensive contributions to technical committees of ASCE and ACI, and for significantly advancing the science and art of structural concrete design."

**Ultimate Strength in Inclined Cracking of Reinforced Concrete Thin Wall Ribbed Panels**

Z. A. Zielinski, research supervisor and visiting professor; and Alfred Abdulazer, research assistant and graduate student, Sir George Williams University, Montreal, Quebec, Canada

**Nonmetallic Coatings for Concrete Reinforcing Bars**

Robert G. Mathey; James R. Clifton; and Hugh F. Beeghly, Materials and Composites Section, Structures, Materials and Life Safety Division, Center for Building Technology, IAT, National Bureau of Standards, Washington, D.C.

**Stiffness and Ultimate Load-Carrying Capacity of Reinforced and Prestressed Concrete Beams Loaded in Combined Torsion, Bending, and Shear**

Lennart G. Elfgren, research associate, Chalmers University of Technology, Gothenburg, Sweden, and visiting post graduate research engineer, Division of Structural Engineering and Structural Mechanics, University of California, Berkeley, California; Inge Karlsson, research associate; Krister Cederwall, associate professor; and Anders Losberg, professor and chairman, Division of Concrete Structures, Chalmers University of Technology, Gothenburg, Sweden

**Inelastic Response of Reinforced Concrete Beams**

John M. Kulicki, instructor; and Celal Kostem, associate professor, Civil Engineering, Fritz Engineering Laboratory, Lehigh University, Bethlehem, Pennsylvania

**Distribution of Negative Moment Reinforcement in Reinforced Concrete T and Box Girder Bridge Deck Slabs**

William D. Shrader, professor of civil engineering, Division of Engineering Mechanics and Civil Engineering, Indiana Institute of Technology, Fort Wayne, Indiana; and Hans Gesund, professor of structural engineering, University of Kentucky, Lexington, Kentucky



THURSDAY, MARCH 8, 9:00 a.m.

basic mechanics of shear transfer

*Pennsylvania 3*

sponsored by ACI-ASCE Committee 426

A second session of the Shear Symposium will be held here tomorrow morning; a third session will be held at the 1973 ACI Fall Convention in Ottawa in October.

**Session Chairman:** Nat Wetzel Krahl, associate professor of structural engineering, Rice University, Houston, Texas

**Overview of the 1973 Shear Committee Report**

J. G. MacGregor, chairman, ACI-ASCE Committee 426, professor of civil engineering, University of Alberta, Edmonton, Alberta, Canada

**Shear Transfer in Members Having Reinforcement at an Angle to the Shear Plane**

Alan H. Mattock, professor of civil engineering, University of Washington, Seattle, Washington

**The Fundamental Behavior of Reinforced Concrete Beams in Bending and Shear**

Howard P. J. Taylor, research engineer, Design Research Department, Cement and Concrete Association, Wexham Springs, Bucks, England

**Influence of Dowel Forces and Aggregate Interlock on Stirrup Load Capacity**

R. N. Swamy, senior lecturer; and A. D. Andriopoulous, graduate student, Department of Civil and Structural Engineering, University of Sheffield, Sheffield, England

**Finite Element Study of Reinforced Concrete Beams with Diagonal Tension Cracks**

Alexander C. Scordelis, professor of civil engineering, University of California, Berkeley, California; D. Ngo, engineer, Central Pacific Development and Investment Corporation, Guam; and H. A. Franklin, engineer, Bechtel Corporation, San Francisco, California

**A Finite Element Analysis of Shear Strength of Reinforced Concrete Beams**

M. Saeed Mirza, associate professor, Department of Civil Engineering and Applied Mechanics, McGill University, Montreal; and Jules Houde, associate professor, Department of Civil Engineering, Ecole Polytechnique, Montreal, Quebec, Canada

THURSDAY, MARCH 8, 2:30 p.m.

abeles symposium on fatigue of concrete

*Rutland*

sponsored by ACI Committee 215

**Session Chairman:** John D. Antrim, professor of engineering, Engineering Technology Programs, Pennsylvania State University, Middletown, Pennsylvania

PART I

**Guide for Design of Concrete Structures Subjected to Fatigue Loading**

**Beams**

Carl E. Ekberg, Jr., professor and head, Department of Civil Engineering, Iowa State University, Ames, Iowa

**Concrete Pavements**

Craig A. Ballinger, structural research engineer, Structures and Applied Mechanics Division, Federal Highway Administration, Bureau of Public Roads, Fairbanks Highway Research Station, Washington, D.C.

PART II

**Recent Experimental Investigations**

**Fatigue Strength of Slabs Reinforced With Wire Fabric**

Neil M. Hawkins, professor of civil engineering, University of Washington, Seattle, Washington

**Contribution to the Fatigue Strength of Reinforced Concrete**

Stefan Soretz, engineer, Tor-Isteg Steel Corporation, Vienna, Austria; presentation by P. K. Mohanty, managing director, Indian Branch, Tor-Isteg Steel Corporation, Luxemburg

**Fatigue of Reinforcement in Beams With Limited Prestress**

E. W. Bennett, reader in civil engineering, Department of Civil Engineering, University of Leeds, Leeds, England

**THURSDAY, MARCH 8, 2:30 p.m.**

evaluating the strength of concrete—  
methods and their significance

*Pennsylvania 1*

**sponsored by ACI Committee 214**

**Session Chairman:** J. Derle Thorpe, assistant professor of civil engineering, Department of Civil and Environmental Engineering, Utah State University, Logan, Utah

**Non-Destructive Methods for Testing Concrete — A Global Review**  
V. M. Malhotra, materials engineer, Construction Materials Section, Mineral Processing Division, Mines Branch, Department of Energy, Mines, and Resources, Ottawa, Ontario, Canada

**The Evaluation of Pull-Out Tests to Determine the Strength of In-Situ Concrete**  
Owen Richards, minerals consultant, Chevy Chase, Maryland; and V. M. Malhotra, materials engineer, Construction Materials Section, Mineral Processing Division, Mines Branch, Department of Energy, Mines, and Resources, Ottawa, Ontario, Canada

**A Non-Destructive Method of Concrete Strength Evaluation**  
Earle L. Page, senior materials engineer, Law Engineering Testing Company, Charlotte, North Carolina; and Richard A. Muenow, director of construction services, Law Engineering Testing Company, Atlanta, Georgia

**Standard and Non-Destructive Test Methods Compared**  
L. E. Rodway, materials engineer, R. M. Hardy and Associates Ltd., Calgary; and C. E. Rodier, materials engineer, City of Calgary, Alberta, Canada

**Monte Carlo Simulation of Statistical Parameters of Concrete Strength Data**  
Kenneth R. Lauer, professor of civil engineering, University of Notre Dame, Notre Dame, Indiana; and Brian Siqueira, constructor estimator, Wright Construction Corporation, Elkhart, Indiana

**FRIDAY, MARCH 9, 9:00 a.m.**

formwork for concrete

*Pennsylvania 1*

**sponsored by ACI Committee 347**

**Session Chairman:** David E. Fleming, consulting engineer, David E. Fleming Company, Denver, Colorado

**Practical Considerations in the Provision of Formwork for Structural Concrete**  
J. G. Richardson, lecturer, Construction Department, Cement and Concrete Association, Fulmer Grange, Slough, Bucks, England

**Casting and Forming Details for Segmental Bridges**  
Thomas M. Galloway, senior design engineer, Advance Construction Equipment, Inc., New Braunfels, Texas

**Plywood Honeycomb Sandwich Panel Forms**  
Ronald Hallam, manager, engineering, Kornreich Products, Inc., San Marcos, California; and Jack Holt, chief engineer, Burke Concrete Accessories, Inc., Burlingame, California

**Form and Shore Requirements for Multi-Story Flat Slab Type Buildings**  
Noel J. Gardner, associate professor, Department of Civil Engineering, University of Ottawa, Ottawa; and R. K. Agarwal, engineer, Ottawa-Carleton Regional Municipality, Ottawa, Ontario, Canada

**Formwork for Some Unusual Buildings**  
Jacob Feld, consulting engineer, Feld, Kaminetzky and Cohen, Consulting Engineers, New York, New York

FRIDAY, MARCH 9, 9:00 a.m.

polymers in concrete

*Pennsylvania 3*

sponsored by ACI Committee 548

**Session Cochairmen:** James T. Dikeou, senior research scientist, Division of General Research, U.S. Bureau of Reclamation, Engineering and Research Center, Denver, Colorado; and Lawrence E. Kukacka, project engineer, Radiation Division, Department of Applied Science, Brookhaven National Laboratory, Upton, New York

**Polymer-Impregnated Concrete as a Composite Material**

Allan Auskern, Radiation Division, Brookhaven National Laboratory, Upton, New York

**Development of Polymer-Impregnated Concrete as a Construction Material for Engineering Projects**

James T. Dikeou, senior research scientist, Division of General Research, U.S. Bureau of Reclamation; and Glenn W. DePuy, research physical scientist, Engineering and Research Center, Denver, Colorado

**Polymer-Impregnated Concrete Surface Treatments for Highway Bridge Decks**

James T. Houston, assistant professor of civil engineering; David W. Fowler, professor, Architect-Engineering Department; and Donald R. Paul, associate professor of chemical engineering, College of Engineering, The University of Texas at Austin, Austin, Texas

**Radiographic Studies of the Structure of Polymer-Impregnated Concrete**

Jitendra K. Bharvaga, doctor, Institution of Structural Engineering and Bridge Building, The Royal Institute of Technology, Stockholm, Sweden

**Polymer-Concrete Reinforced Concrete Composite Beams**

D. J. Naus and P. Howdyshell, U.S. Army Construction Engineering Research Laboratory, Champaign, Illinois; and James L. Lott, associate professor, Civil Engineering Department, Illinois Institute of Technology, Chicago, Illinois

FRIDAY, MARCH 9, 9:00 a.m.

behavior and design of beams  
subjected to shear

*Pennsylvania 3*

sponsored by ACI-ASCE Committee 426

A third session of the Shear Symposium will be held at the 1973 ACI Fall Convention in Ottawa in October.

**Session Chairman:** J. G. MacGregor, chairman, ACI-ASCE Committee 426, and professor of civil engineering, University of Alberta, Edmonton, Alberta, Canada

**Dynamic Shear Strength of Reinforced Concrete Beams**

R. H. Seabold, senior project engineer, Structures Division, U.S. Naval Civil Engineering Laboratory, Port Hueneme, California

**Effects of Reversals of High Shears on the Design of Flexural Reinforced Concrete Members**

Vitelmo V. Bertero; and E. P. Popov, professors of civil engineering, University of California, Berkeley, California

**Continuous Joists With Circular Web Openings**

N. F. Somes, chief, Structures Section, Center for Building Technology, IAT, U.S. Department of Commerce, National Bureau of Standards, Gaithersburg, Maryland; and W. Gene Corley, manager, Structural Development Section, Portland Cement Association, Skokie, Illinois

**Prestressed Concrete T-Beams With Large Web Openings**

J. Warwaruk, professor of civil engineering, University of Alberta, Edmonton, Alberta, Canada

**Shear Strength of Prestressed and Reinforced Concrete T-Beams**

Paul E. Regan, reader in civil engineering, Polytechnic of Central London, London, England; and Massoud Moayer, structural engineer, O. Keller, ETH, SIA, Solothurn, Switzerland.

**The Method of Design of Inclined Sections in Reinforced Concrete Under the Action of Bending Moments and Shear Forces**

A. S. Zalesov, senior scientific worker, NIIZhB Gosstroy USSR, Moscow, USSR

**Comparison and Summary of Shear Symposium Papers**

Peter Gergely, associate professor of structural engineering, Cornell University, Ithaca, New York

# exhibition

english lounge and stair hall

## hours:

Tuesday . . . . 1:00 p.m. to 6:00 p.m.  
Wednesday . . . . 10:00 a.m. to 6:00 p.m.  
Thursday . . . . 10:00 a.m. to 6:00 p.m.

## exhibitors:

- Adhesive Engineering Company** — Structural concrete bonding process epoxy injection.
- Chemically Prestressed Concrete Corporation** — Expansive cement manufactured to reduce drying shrinkage in concrete.
- Effo Systems, Inc.** — Concrete form ties.
- Erico Products, Inc.** — Rebar Splices.
- Fegles-Power Service Corporation** — Slip form concrete construction.
- Intrusion-Prepakt, Inc.** — Erosion control revetments, pile jackets, foundation stabilization by grouting methods, concrete, cast-in-place piles.
- Master Builders** — Pozzolite polymer-type admixture for improving pumped, prestressed, precast, lightweight, etc., concrete.
- National Ash Association, Inc.** — Use of power plant ash in concrete and concrete products.
- Occupational Safety and Health Administration** — Information on OSHA.
- Sika Chemical Corporation** — Admixtures, epoxy coatings, waterproof membranes, joint sealants for concrete construction/maintenance/restoration.
- Stelmo, Inc.** — Steel formwork, concrete production plant, tunnelling equipment.
- Stricon Products Limited** — Splicers and stress splicers.
- Teka Construction Equipment Corporation** — Concrete mixer.
- Vibco, Inc.** — Air and electric vibrators for concrete placement and densification, bins, screens, chutes, carshakers, etc.
- Watson Bowman Associates Inc.** — Expansion joint sealing systems.
- Charles R. Watts Company** — Concrete air meters.

THURSDAY, MARCH 8, 12:15 p.m.

## awards luncheon

vernon room

awards program featured speaker

*New Uses for Concrete in the Consolidation and Reconstitution of Historic Structures*

**James Marston Fitch**, founder and director of the graduate program of Restoration and Preservation of Historic Architecture at Columbia University, author of **American Building**

## awards program

### Honorary Memberships:

Clyde E. Kesler  
Anton Tedesko

### Henry C. Turner Medal:

Bryant Mather

### Alfred E. Lindau Plaque:

Fazlur R. Khan

### Henry L. Kennedy Award:

Richard C. Mielenz

### Charles S. Whitney Medal:

U. S. Bureau of Reclamation,  
Engineering Laboratory

### Arthur R. Anderson Medal:

Adam M. Neville

### Roger H. Corbetta Award:

Arthur R. Anderson

### Wason Medal for Most Meritorious Paper:

David R. Lankard  
Donald L. Birkimer  
F. Frederick Fondriest  
M. Jack Snyder

### Wason Medal for Materials Research:

K. W. Nasser  
R. P. Lohtia

### Raymond C. Reese Structural Research Award:

Alexander Placas  
Paul E. Regan

### Department of the Army Certificate of Appreciation for Patriotic Civilian Service:

American Concrete Institute

### Recognition of Retiring Officers

### Report of Tellers

### Introduction of New Officers

### New President's Address

### Presentation of Memento to Retiring President

ladies program

ladies hospitality suite: Solarium

**MONDAY**

9:00 a.m. to 11:00 a.m.

Ladies Registration

11:00 a.m. to 3:00 p.m.

Renault Winery — Luncheon and tour,  
wine tasting

**TUESDAY**

9:00 a.m. to 11:00 a.m.

Ladies Registration

11:00 a.m. to 2:00 p.m.

Luncheon and Fashion Show

**WEDNESDAY**

9:00 a.m. to 11:00 a.m.

Ladies Registration

11:00 a.m. to 3:30 p.m.

Smithville — Luncheon and shopping tour

**THURSDAY**

9:00 a.m. to 12:00 noon

Ladies Hospitality

12:00 noon

Awards Luncheon

future conventions

**1973 — October 6 - 12**

Chateau Laurier  
Ottawa, Ontario, Canada

**1974 — March 30 - April 5**

Sheraton-Palace Hotel  
San Francisco, California

**1974 — October 26 - November 1**

Sheraton-Biltmore Hotel  
Atlanta, Georgia

**1975 — April 6 - 11**

Sheraton Boston Hotel  
Boston, Massachusetts

**1975 — November 1 - 7**

The Bayshore Inn  
Vancouver, British Columbia, Canada

**ATLANTIC CITY CONVENTION  
COMMITTEE**

**Chairman**

Jack W. Weber  
Master Builders

**Secretary**

Raymond C. Heun, P. E.  
New York Concrete Construction  
Institute

**Finances**

Raymond A. Ayres  
Nytralite Division  
New York Trap Rock Corporation

**Publicity**

George L. Breen  
Sika Chemical Corporation

**Student Activities**

Dr. Edward G. Nawy  
Rutgers University

**Technical Activities**

Eugene M. Smith, P. E.  
Consulting Engineer

**Arrangements**

Vincent J. Carpentier  
Capitol Concrete Company

**Ex Officio**

Louis Hajdu  
Louis Hajdu, Inc.

The officers, staff, and members of ACI would like to thank  
the Local Committee, the Hostesses, and the Chapter  
for their part in the 1973 Annual Convention.



QUIETNESS  
IS THE MASTER  
OF THE DEED

(Tau)