

*International Symposium on DURABILITY OF CONCRETE CONSTRUCTION*



Center for By-Products Utilization  
3200 North Cramer Street, Room W309  
P. O. Box 784  
Milwaukee, WI 53201

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*UWM-CBU Concrete Materials Technology Series Program No. 69*

**International Symposium on DURABILITY OF CONCRETE CONSTRUCTION**



*Sponsored By*

**UWM Center for By-Products Utilization, Milwaukee, WI  
Lafarge North America, Herndon, VA**

**ACAA Educational Foundation, Aurora, CO; Headwaters Resources, South Jordan, UT; and  
American Concrete Institute, Farmington Hills, MI**

*Co-Sponsored By*

**New Berlin Redi-Mix, Inc.; Wisconsin Chapter, American Concrete Institute; Wisconsin Concrete Pavement Association; and  
Southeast Branch, Wisconsin Section ASCE**

**June 5 & 6, 2006 Holiday Inn Milwaukee-City Centre, Milwaukee, WI**

**Workshop Description**

The purpose of the workshop is to bring attendees up-to-date with the latest information on the use of concrete in long-lasting and durable construction. Many factors affecting durability of concrete construction will be discussed. Specially invited speakers from France, Italy, Japan, Mexico, and USA will discuss how to achieve durable concrete construction. The program will include presentations showing important technical, environmental, and economic advantages of using concrete in everyday construction projects. This international symposium should be of interest to those associated with the construction industry, design and materials engineers, architects, engineering technicians, engineers working in governmental agencies, industry and private practice, engineering faculty and students, as well as ready-mixed concrete producers, concrete products manufacturers, and concrete contractors. The workshop will also provide significant help to people from transportation agencies and industries responsible for durable concrete construction. The program will cover basic information, application case histories, as well as the latest developments in durable concrete materials and construction. Knowledgeable professionals will present state-of-the-art information. Handout materials will be provided.

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DURABILITY OF CONCRETE CONSTRUCTION**

**PROGRAM**

**Monday, June 5, 2006**

**7:45 a.m. Registration and Coffee**

**8:30 Attributes of Portland Cement and Its Contribution to Durability of Concrete. Oscar Tavares**

**10:00 Coffee Break**

**10:15 Contribution of Fly Ash, Slag, Silica Fume, Metakaolin, and Natural Pozzolans to Durability of Concrete and Concrete Products. Tarun R. Naik**

**11:45 Lunch**

**12:45 p.m. Contribution of Aggregates to Durability of Concrete. David W. Fowler**

**2:00 Minimizing Reinforcement Corrosion and Increasing Durability of Concrete Structures. Habib Tabatabai**

**3:15 Break**

**3:30 Designing for Durability of Concrete Structures for Long-life Span - A Perspective from Italy. Giacomo Moriconi**

**5:00 Cocktail Hour (Cash Bar)**

**6:00 Dinner**

**7:30 Adjourn**

**Tuesday, June 6, 2006**

**7:45 a.m. Registration and Coffee**

**8:15 Designing for Durability of Concrete Structures for Long-life Span - A perspective from Japan. Kenji Sakata**

**9:45 Coffee Break**

**10:00 Designing for Durability of Concrete Structures for Long-life Span - A Perspective from France. Jean Pera**

**11:45 Lunch**

**12:45 p.m. Use of Aggregate Microfines for Producing High-Quality, Durable Concrete. David W. Fowler**

**1:45 Durability of Cementitious Grouting Materials with Nano-Particles. Brian H. Green**

**2:45 Break**

**3:00 Durability of High-Strength Concrete with High-Volumes of Mineral Additives. Konstantin Sobolev**

**4:00 Use of Circulating Fluidized Bed Combustion Ashes in Durable Construction Applications. Anol Mukhopadhyay**

**5:00 Adjourn**

## SPEAKER INFORMATION

### The program is scheduled to include the following speakers:

**David W. Fowler, Joe J. King Chair in Engineering and Director, International Center for Aggregates Research, The University of Texas at Austin.** Professor Fowler has many years of experience in research in concrete-polymer composites and concrete materials, and aggregates in concrete. He is a past member of the Board of ACI, chair of many committees and member of numerous technical organizations. He is a member of the National Academy of Engineering. He is also the recipient of many teaching awards.

**Brian H. Green, R.P.G., Research Geologist, Concrete and Materials Branch, Engineer Research and Development Center, U.S. Army Corps of Engineers, Vicksburg, MS.** Mr. Green's research has included the development of cementitious-based grout and concrete mixtures to support various Corps of Engineer's civil and military programs and other U.S. Department of Defense agencies. This work has included the development of mixtures ranging from controlled low-strength materials to roller-compacted concretes. Mr. Green is a member of Sigma Xi, ACI Committee 229, and serves as chair of ACI Committee 552, Cementitious Grouting Materials.

**Giacomo Moriconi, Director and Professor of Materials Science and Technology, Department of Materials and Environment Engineering and Physics, Università Politecnica delle Marche, Ancona, Italy.** Professor Moriconi's research contributed significantly in the area of concrete durability and sustainable construction. He has published over 200 papers in referred journals and symposia. As a professional engineer he implemented an effective technology transfer applied to the construction industry. He is a member of ACI, ASCE, and RILEM.

**Anol Mukhopadhyay, Research Scientist, Texas Transportation Institute, Texas A&M University, College Station, TX.** Dr. Mukhopadhyay's main areas of research include concrete material characterization and durability, alkali-silica reactivity (ASR), mineral admixtures, conventional and fluidized bed ashes, and aggregate coefficient of thermal expansion (CoTE). He is currently working as a key researcher in mitigation of ASR. Dr. Mukhopadhyay has been recognized as a good speaker in classrooms, seminars, symposiums, and conferences.

**Tarun R. Naik, Ph. D., P. E., Director and Professor, UWM Center for By-Products Utilization, Milwaukee, WI.** Professor Naik has over 40 years of experience with concrete. His contribution in teaching and research has been well recognized nationally and internationally. His research has resulted in over 250 technical reports and papers in ACI, ASCE, ASTM, RILEM, etc. He is a member of ACI, ASCE, ASEE, ASTM, RILEM, NSPE, and WSPE. He is a member of many technical committees of ACI, ASCE, ASTM, and RILEM. He has served as a president of WI-ACI, WSPE, and other organizations.

**Jean Pera, P. E., Director and Professor of Civil Engineering, Department of Civil and Urban Engineering, Institut National des Sciences Appliquées de Lyon (INSA), France.** Professor Pera has made significant contributions to durability of concrete, development of new types of cements, and self-leveling screeds and concrete. He has an outstanding reputation in education, in classrooms as well as for continuing education seminars, symposiums, and conferences. He has published over 200 technical publications in referred journals and symposia.

**Konstantin Sobolev, Professor, Facultad de Ingeniería Civil, Universidad Autónoma de Nuevo León, Monterrey, N. L., México.** Professor Sobolev has been developing innovative and effective technologies for manufacturing high-performance cement and concrete for the last 15 years. His research includes work with cement, concrete, chemical admixtures, nano-additives, mineral additives, as well as number of industrial by-products.

**Kenji Sakata, Professor of Civil Engineering, Department of Environmental and Civil Engineering, Okayama University, Okayama, Japan.** Professor Sakata's research activity has focused on the properties of concrete, especially creep, shrinkage, fatigue, and durability of concrete. His prediction models of creep and shrinkage were adopted as Japanese standard prediction models by JSCE. He has also served as member of ACI 209 Technical Committee (Creep and Shrinkage). He has received numerous awards from JSCE, JSMS, JCA, JSDE, RMCAS, and CANMET/ACI.

**Habib Tabatabai, P. E., Associate Professor of Structural Engineering, Department of Civil Engineering and Mechanics, University of Wisconsin-Milwaukee, WI.** Professor Tabatabai has over 20 years of experience in research, testing, and evaluation of reinforced and prestressed concrete structures. He has led several major studies on corrosion and repair of concrete structures. These studies include factors affecting chloride penetration into concrete, modeling and simulation of corrosion-induced cracking and spalling, and accelerated evaluation of repair methods. He is a member of ACI, PCI, and ASCE, and is active in a number of technical committees.

**Oscar Tavares, earned his BS degree in Chemistry from University of Texas.** Mr. Tavares has 30 years in cement industry with experience in quality, manufacturing, process, new product innovation, and sales. He worked for 20 years at Holnam and 8 years at Lafarge – NA. He is a member of ASTM C1 and C9 and ACI, and Chair of ACI 225, Hydraulic cements. He is active in USGBC, TRB, and other industry associations.

