

**PROGRAM OF THE FORTIETH
INTERNATIONAL CONFERENCE ON CEMENT MICROSCOPY
SPONSORED & ORGANIZED BY INTERNATIONAL CEMENT MICROSCOPY
ASSOCIATION (ICMA) (WWW.CEMMICRO.ORG)
CO-SPONSORED BY MAPEI CORPORATION (MILAN ITALY & USA)
EMBASSY SUITES, 950 S. OCEAN DRIVE, DEERFIELD BEACH, FLORIDA 33441, U.S.A.
May 13 – 17, 2018**

SUNDAY, May 13, 2018

2:00 – 4:00 PM – **REGISTRATION**

Embassy Suites of Deerfield Beach, Florida, USA

6:00 – 8:00 PM – **Welcome Reception**

Hosted by ICMA & Co-Host: ROAN Industries, Inc.

MONDAY, May 14, 2018

8:00 – 9:00 AM – **REGISTRATION**

Embassy Suites of Deerfield Beach, Florida, USA

9:00 – 9:20 AM – **Welcome & Opening Address**

Dr. Arturo G. Nisperos
ICMA General Chairman

9:20 – 9:30 AM – **Introduction of Keynote Speaker**

Dr. David Sobransingh of Mapei-USA
Local Site Selection Committee Chairman

9:30 – 10:00 AM- **Keynote Address**

Mr. Luigi DiGeso
President and CEO
MAPEI Americas
Deerfield Beach, Florida, U.S.A.

10:00 – 10:10 AM - **Program Introduction**

Dr. Herbert Poellmann
Program Committee Chairman

10:10 – 10:35 AM – **CHARACTERIZATION AND UNDERSTANDING OF CLINKER AND CEMENT
REACTIVITY THROUGH MULTI-DISCIPLINARY ANALYTICAL APPROACH**

H. Wang
Mapei GRT, Inc., Eagan, U.S.A.

A. LoPresti and M. Magistri
Mapei, S.p.A., R&D Central Laboratory
Milan, Italy

10:35 – 10:50 AM – **BREAK**

10:50 – 11:15 AM – **IMPROVING PRECISION AND ACCURACY OF RIETVELD REFINEMENT
METHOD FOR CEMENT PHASE QUANTIFICATION**

Ramnath M. G. and A. Mukhopadhyay
Department of Civil & Environmental Engineering
Texas A&M University, College Station
Texas, U.S.A.

11:15 – 11:40 AM – **CERTIFICATION OF SRM 2687a, PORTLAND CEMENT CLINKER FOR PHASE
ANALYSIS**

P. Stutzman and A. Heckert
National Institute of Standards & Technology (NIST)
Materials & Structural Systems Division
Gaithersburg, Maryland, U.S.A.

11:40 – 12:05 PM – **Introduction of Exhibitors**
Dr. Ronny Kaden
Exhibit Committee Chairman

12:05 – 1:00 PM – **LUNCH BREAK**

1:00 – 1:25 PM - **THE INFLUENCE OF CHEMICAL AND MINERALOGICAL VARIABILITY ON THE
GRINDING BEHAVIOUR OF LIMESTONE**

K. Suresh, A. Sadangi, M. Kuchya and J.B. Kazirukanyo
Central R&D, Ultra Tech Cement Ltd., Aditya Birla Science
and Technology Center
Mumbai, India

1:25 – 1:50 PM – **WOLLASTONITE A CS-CEMENT – CURING BY CARBONATION – USE AS WELL
CEMENT**

K. Svensson, A. Neumann, H. Poellmann, F. Menezes, & C. Lempp
Institute of Geoscience and Geogaphy
University of Halle-Wittenburg
Halle, Germany

1:50 – 2:15 PM – **STUDIES ON THE INFLUENCE OF DIFFERENT FLUORINE MINERALS PORTIONS ON THE MINERAL COMPOSITION OF BELITE-FLUOROALUMINATE CEMENTS**

S. Gallucio and H. Poellmann
Department of Mineralogy & Geochemistry
Martin-Luther University
Halle, Germany

2:15 – 2:40 PM – **UNDERSTANDING MICROSTRUCTURE AND CRACK PROPAGATION OF PORTLAND CEMENT CONCRETE CONTAINING RECLAIMED ASPHALT PAVEMENT (RAP) AGGREGATES USING PETROGRAPHIC AND OTHER ADVANCED TOOLS**

A. Mukhopadhyay
Department of Civil & Environmental Engineering
Texas A&M University
College Station, Texas, U.S.A.

2:40 – 3:05 PM – **IMPACT OF SUPERCRITICAL CARBON DIOXIDE AND CHLORIDE RICH BRINE ON A CEM 111 CEMENT (GRANULATED SLAG SAND) AT NON AMBIENT CONDITIONS (16 MPa, 333K)**

K. Svensson, A. Neumann, H. Poellmann, F. Menezes, and C. Lempp
Institute of Geoscience and Geogaphy
University of Halle-Wittenberg
Halle, Germany

3:05 – 3:20 PM **BREAK**

3:20 – 4:05 PM - **PETROGRAPHIC STAGE OF ALKALI-SILICA REACTION IN CONCRETE AND ASSOCIATED COMPOSITIONAL CHANGES OF REACTION PRODUCTS**

T. Katayama
Taiheiyo Consultants Co. Ltd.
Sakura, Japan

4:05 – 4:30 PM - **ROLE OF THE SULPHATE SOURCE IN THE HYDRATE PHASE FORMATION OF ETTRINGITE-FORMING CEMENT PASTES**

E. Qoku and D. Bier
Institut für Keramik, Glas- und Baustofftechnik
TU Bergakademie Freiberg
Freiberg, Germany

4:30 – 4:55 PM – **MINERALOGICAL ANALYSES OF THE IMPACT OF CO₂ AND ASSOCIATED COMPOUNDS ON SANDSTONE IN THE PRESENCE OF FORMATION WATERS AT NON AMBIENT CONDITIONS**

A. Neumann, K. Svensson, H. Poellmann, F. Menezes, and C. Lempp
Institute of Geoscience and Geography
University of Halle
Halle, Germany

4:55 – 5:20 PM – **ASSESSMENT OF OCEAN WATER EFFECT ON COMMERCIAL MORTARS BASED ON SUPPLEMENTARY CEMENTITIOUS MATERIALS**

R. Liferovich, M. Dham, K. Hafkey, D. Sobransingh
Mapei Corporation
Research & Development
Deerfield Beach, Florida, U.S.A.

TUESDAY, MAY 15, 2017

8:00 – 8:05 AM – **REGISTRATION & WELCOME**

8:05 – 12:05 Noon – **PANEL DISCUSSION : ADMIXTURES TODAY – IMPACT OF CONCRETE PERFORMANCE, CHEMISTRY AND MICROSTRUCTURE**

Conducted by Dr. Karen Luke, Workshop Coordinator & Chairman

• **PANELISTS:**

1. **Prof. Dr. J. Plank** – Technical University, Munich, Germany – **“Current Trends in Concrete Admixtures.”**
2. **Mr. M. Magistri** – R&D Manager, Cement Additives Division, Mapei SpA, Milan, Italy and **Dr. G. Ferrari** – Sr. Researcher, Mapei SpA, Milan, Italy: **“The Interaction of Chemical Admixtures with Cement and Concrete: Grinding, Hydration and Application.”**

- 3. Dr. P. Schwesig** – Senior Scientist, BASF Advanced Materials & Systems Research, Construction & Coating Materials Research, Mineralogy (RAB/OM), Trostberg, Germany – **“Changes in the World of Concrete – Cements, Superplasticizers, Interactions.”**

12:05 – 1:00 PM – **LUNCH BREAK**

1:00 – 6:00 PM – **BUS TRIP TO INTERESTING SITES & ATTRACTIONS IN FORT LAUDERDALE, FLORIDA
(REFER TO 3-FOLD BROCHURE FOR THE SITES & ATTRACTIONS)**

The following interesting sites and attractions are available in Ft. Lauderdale, Florida which we can offer to the attendees. The Bus Trip to the interesting sites and attractions will depend upon the interest of the majority of the participants within the time frame and budget of ICMA:

- Viscaya Museum & Gardens
- Bayside Marketplace
- Art Deco District
- South Beach
- Jungle Queen Riverboat
- Museum of Discovery and Science Fort Lauderdale

At the leisure hours of the participants before/after and during the conference, the following activities and attractions are available to explore:

- Everglades National Park
- Butterfly World
- Miami Seaquarium
- Morikami Museum and Japanese Gardens
- Lion Country Safari
- Palm Beach Zoo
- Intracoastal Boat Tours
- Deep Sea Fishing Excursions
- South Beach/Miami Beach/Fort Lauderdale Beach Night Life
- Premium Shopping Centers (Sawgrass Mills Mall, Town Center Mall, Aventura Mall)
- Hard Rock Casino
- Endless Miles of Beaches
- The Cruise Ship Ports are nearby and attendees can take a short cruise after the conference.
- World Famous Theme Parks including Disney World and Universal are within three (3) hours drive of Deerfield Beach

WEDNESDAY, MAY 16, 2018

8:00 – 8:05 AM – **REGISTRATION & WELCOME**

8:05 – 12:05 PM- **PANEL DISCUSSION: NANO-MATERIALS IN CONCRETE – FROM NANO-STRUCTURE TO APPLICATION**

Conducted by Dr. Karen Luke, Workshop Coordinator & Chairman

• **PANELISTS**

1. **Dr. L Raki** – Senior Research Officer, Construction, National Research Council, Ottawa, Canada – **“A Multiscale Study on the Effect of NanoTiO₂ on Cement and Concrete Properties.”**
2. **Dr. G. Quercia** – Director of Research, TAKTL-LLC, Pennsylvania. USA – **“Nano-Silica: From Production to Applications.”**
3. **Prof. A. K. Mukhopadhyay** – Research Scientist/Ad. Graduate Faculty, Materials and Rigid Pavement, Texas A&M Transportation Institute, Texas A&M University, College Station, Texas – **Different Areas of Improvement in Concrete Properties and Durability through the Applications of Nanotechnology.**

12:05 – 1:00 PM – **LUNCH BREAK**

1:00 – 1:25 PM – **FINISH MILL OPERATION – THE LAST OPPORTUNITY TO PRODUCE A CEMENT WITH OPTIMIZED CEMENT CHEMISTRY**

H. Wang
MAPEI –GRT, Inc.
Eggan, U.S.A.
M. Dham
MAPEI – USA R&D Center
Deerfield Beach, Florida, U.S.A.

1:25 – 1:50 PM – **A COMPARISON OF METHODS FOR AMORPHOUS QUANTIFICATION IN THE CEMENT INDUSTRY USING X-RAY DIFFRACTION**

L. Gobbo
MalvernPanalytical
Westborough, Massachusetts, U.S.A.

1:50 – 2:15 PM – **STUDYING THE MECHANICAL PROPERTIES AND CHARACTERIZATION OF MICRO-ENCAPSULATED PHASE CHANGE MATERIALS FOR IMPROVING THE THERMAL PERFORMANCE OF PORTLAND CEMENT CONCRETE AND GEO-POLYMER CEMENT CONCRETE FOR PASSIVE BUILDING APPLICATIONS**

S. Pilehvar and A-L. Kioniksen
Faculty of Engineering
Ostfold University College,
Holden, Norway

N. Al-Manasir
R & D Group Manager Concrete Industri
& Mapei AS
Sagstua, Norway

2:15 – 2:40 PM – **A NEW CALCIUM ALUMINATE CEMENT WITH ADVANCED PERFORMANCE**

R. Kaden, M. Schmid, and G. Walenta
Calucem GmbH
Mannheim, Germany

2:40 – 3:05 PM – **DELAYED ETTRINGITE FORMATION AND DISTRESS IN GROUT**

H. (Xiaoqiang) Hou, K.A. Steiner, T. Werner, J.F. Sfura
Wiss, Janney & Elstner & Associates, Inc.
Northbrook, Illinois, U.S.A.

3:05 – 3:20 PM - **BREAK**

3:20 – 3:45 PM - **INTRODUCTION OF ICMA -WALTER W. ROWE SCHOLARSHIP**

By: Dr. Karl Peterson – Chairman & Dr. Arianna LoPresti Co-Chair, Scholarships
& Awards Committee
Walter W. Rowe – First ICMA General Chairman & Co-Founder of ICMA

3:45 – 4:10 PM – **IN MEMORIAM - WILLIAM (BILL) CARRUTHERS**
Montgomery, Texas, U.S.A.

Second ICMA General Chairman & Co-Founder of ICMA

4:10 – 4:30 PM – **CLINKER MICROSCOPY 101**

Chuck Buchanan
C₃S Petrographic
Durkee, Oregon, U.S.A.

4:30 – 4:45 PM – **CLINKER EXCHANGE PROGRAM**

Dr. Hugh Hou, Clinker Sample Exchange Committee Chairman
Chuck Buchanan, Co-Chairman

4:45 – 5:00 PM – **ANNOUNCEMENT OF 2019 ICMA CONFERENCE**

Tom Dealy & Dr Arianna LoPresti
Site Selection Committee Chairs

5:00 -5:10 PM – **CLOSING REMARKS**

Dr. Arturo G. Nisperos
ICMA General Chairman

6:00 – 8:00 PM – **ICMA HOSTED RECEPTION**

(VENUE TO BE ANNOUNCED)

THURSDAY, MAY 17, 2018

9:00 AM – 5:00 PM – **TECHNICAL TOURS – MAPEI CORPORATION (USA)**

Conducted by: Dr. David Sobransingh & Dr. Ruslan Liferovich

Assisted by: Tom Dealy, ICMA Financial Officer-Treasurer

*Tour of its State-of-the-Art Research & Development Center and
Manufacturing Facility located in Fort Lauderdale.*

GUEST/SPOUSE PROGRAM

Guest/Spouse Program will be organized on demand for the 40th ICMA Conference in Deerfield Beach, Florida, USA and details will be shared as registration progresses and will be announced in the ICMA webpage (www.cemmicro.org). Please in your registration state if a spouse or guests will accompany you at the conference. (Spouse & Guest Committee: Lourdes M. Nisperos-Chairman; Maria Poellmann & Jo Ann Buchanan-Co-Chairmen).

**SEE YOU ALL AT THE 2019 ICMA CONFERENCE
VISIT THE ICMA WEBSITE FOR MORE
INFORMATION ABOUT THE
41st ICMA CONFERENCE**