

**FINAL PROGRAM OF THE FORTIETH  
INTERNATIONAL CONFERENCE ON CEMENT MICROSCOPY  
SPONSORED & ORGANIZED BY INTERNATIONAL CEMENT MICROSCOPY  
ASSOCIATION (ICMA) ([WWW.CEMMICRO.ORG](http://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 CO<sub>2</sub> 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 PALM BEACH, FLORIDA AREA**  
**(REFER TO 3-FOLD BROCHURE FOR THE SITES & ATTRACTIONS)**

The following interesting sites and attractions are available in Palm Beach, Florida Area 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:

- **Gumbo Limbo Nature Center & Aquarium**
- **Society of the Four Arts, Botanical Garden, Sculpture Garden, and Art Museum**
- **Hillsboro Inlet Lighthouse**
- **Sandoway Discovery Center (If time permits and available budget of ICMA)**

At the leisure hours of the participants, their spouses & guests, before/after/during the conference, the following activities and attractions are available to explore in Fort Lauderdale, Florida Area:

- Viscaya Museum & Gardens
  - Bayside Marketplace
  - Art Deco District
  - South Beach
  - Jungle Queen Riverboat
  - Museum of Discovery and Science Fort Lauderdale
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- 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 NanoTiO<sub>2</sub> 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.”**
4. **Dr. K. Ioannidou** – Postdoctoral Associate, MIT Concrete Sustainability Hub and Multiscale Materials Science for Energy and Environment, Joint MIT-CNRS Laboratory, MIT Energy Initiative, Cambridge, MA, USA - **“Multiscale Modeling of Cement: Microstructure, Mechanics and Durability.”**

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 – **A NEW CALCIUM ALUMINATE CEMENT WITH ADVANCED PERFORMANCE**

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

2:15 – 2:40 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.

2:40 – 3:05 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

3:05 – 3:20 PM – **BREAK**

3:20 – 3:45 PM – **IN MEMORIAM - WILLIAM (BILL) CARRUTHERS  
Montgomery, Texas, U.S.A.**

Second ICMA General Chairman & Co-Founder of ICMA

Led by: Tom Dealy & Walter W. Rowe

3:45 – 4:10 PM – **CLINKER MICROSCOPY 101**

Chuck Buchanan  
C<sub>3</sub>S Petrographic  
Durkee, Oregon, U.S.A.

**4:10 – 4:35 PM – CLINKER EXCHANGE PROGRAM**

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

**4:35 – 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 40<sup>th</sup> 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](http://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).*

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