International Union of Laboratories and Experts in Construction Materials, Systems and Structures,

Réunion **I**nternationale des **L**aboratoires et **E**xperts des **M**atériaux, systèmes de construction et ouvrages

Kamal H. Khayat

Director Center for Infrastructure Engineering Studies,

Professor, Civil Engineering

Missouri University of Science & Technology

Founded in 1947 mainly to:

- renew international relations & international cooperation between institutions for testing and research on materials and structures
- promote scientific cooperation in the area of construction materials & structures

… over the years, RILEM mission grew to include:

- stimulation of **new directions of R&D**
- promotion of **excellence in construction**
- **technology transfer** and application of knowledge world-wide
- encouragement of **international cooperation**

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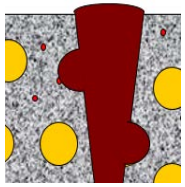
In 2014, 34 TCs are active in 6 Clusters
4 Clusters pertaining to concrete



Material Processing and Characterization

Nicolas ROUSSEL

Transport and Deterioration Mechanisms

Nele DE BELIE

Structural Performance and Design

Takafumi NOGUCHI

Service Life and Environmental Impact Assessment

Kefei LI

Masonry and Timber

Paulo LOURENCO

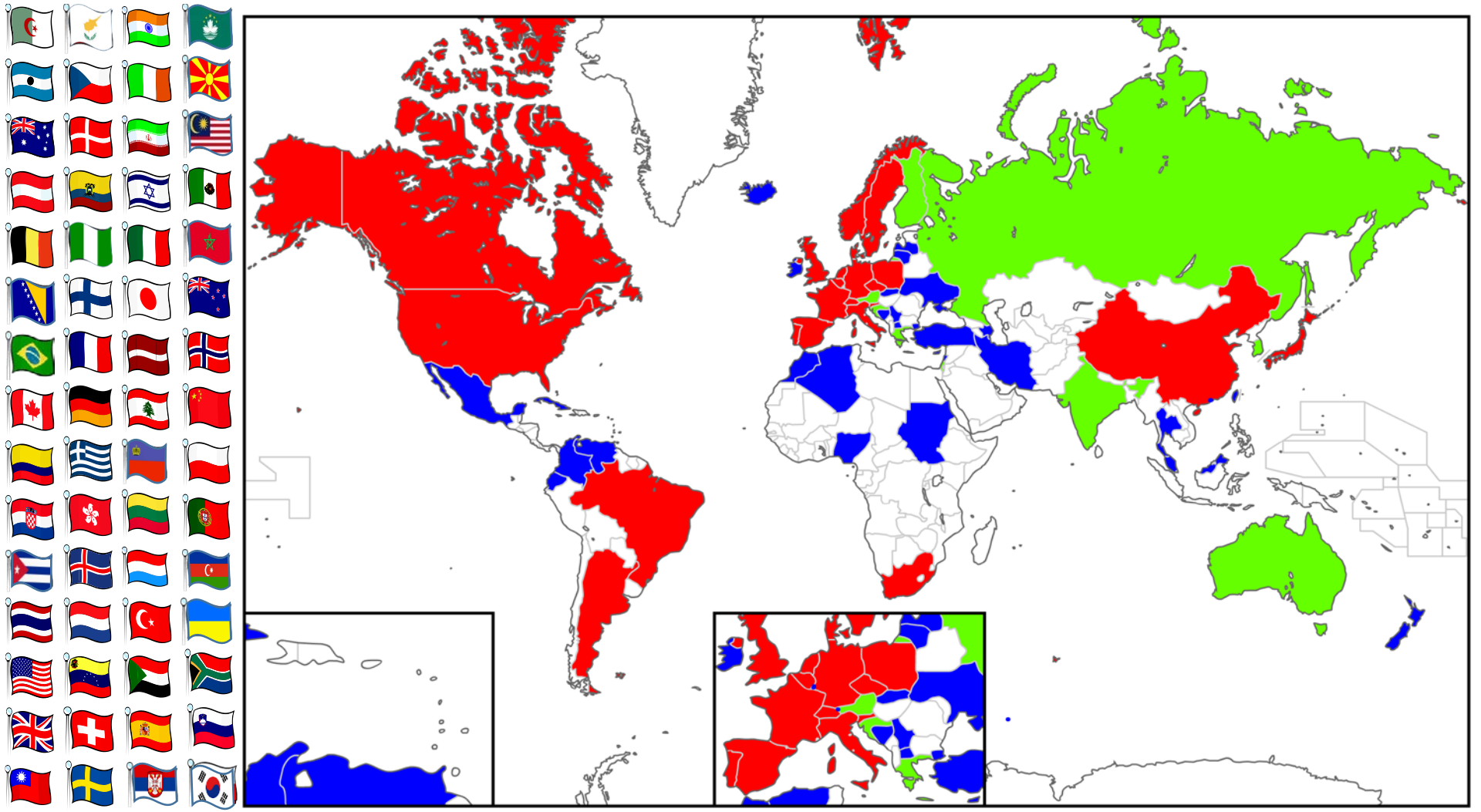
Bituminous Materials and Polymers

Hervé DI BENEDETTO

Nearly 1400 experts involved in RILEM
About 700 of members active in Technical Committees

2014

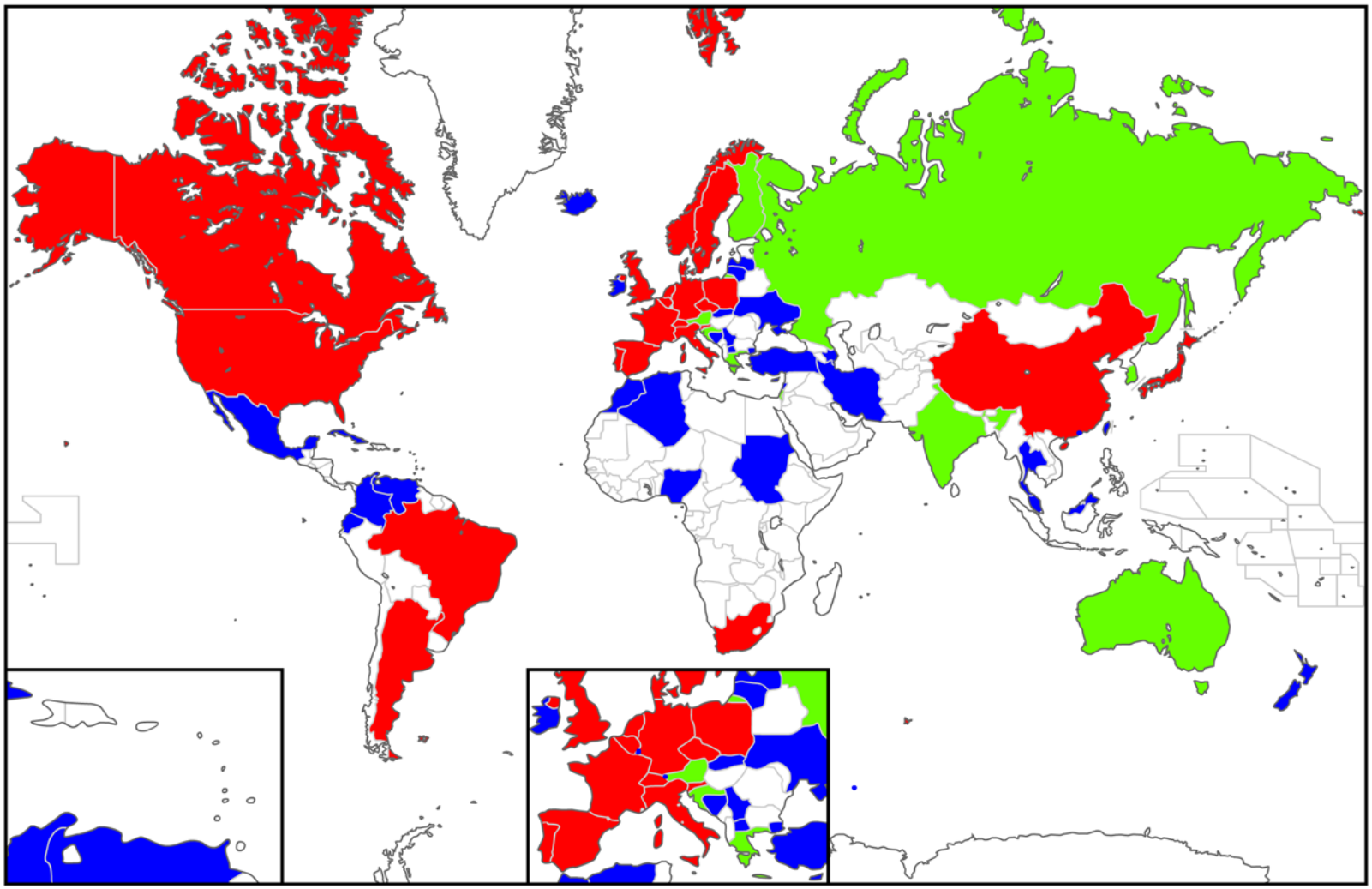
63 Countries, 102 Institutes



Regional Conveners

South Saharan/Africa
East Asia
East Europe and Central Asia
Latin America

North America
Oceania
Europe
Middle East, North Africa & South Asia



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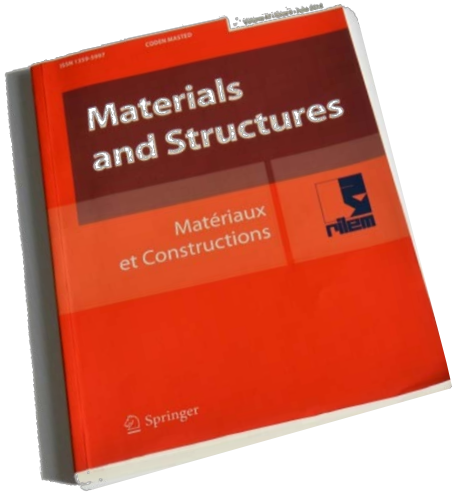
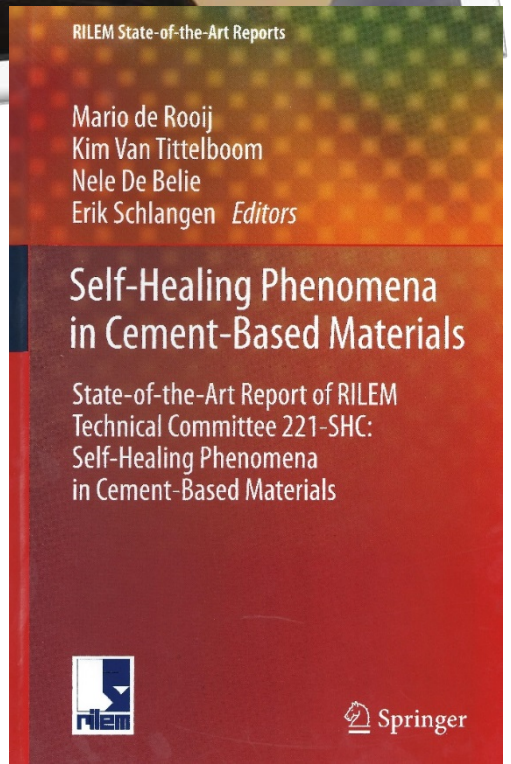
Dissemination of information

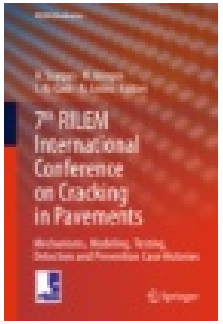
State-of-the-Art Reports
Recommendations on test methods
Conference Proceedings
Scientific Journal
Website

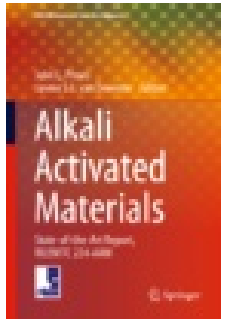


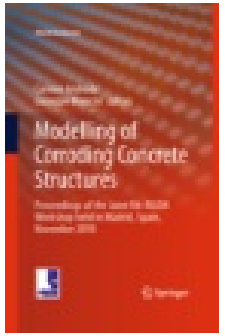
TC 221-SHC

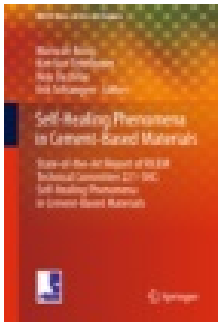


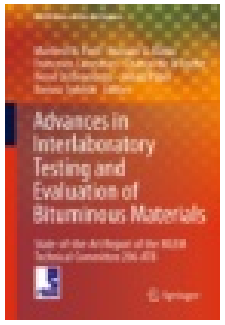
SOARs available on-line

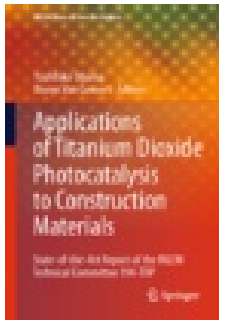


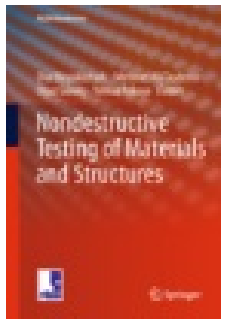


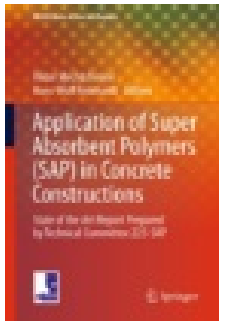


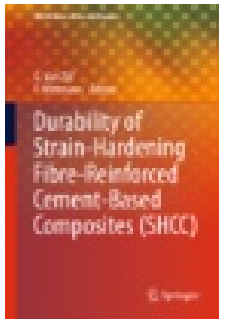


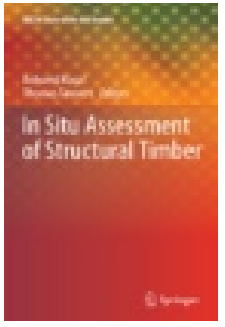


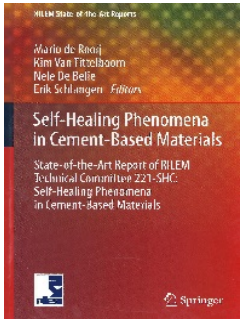


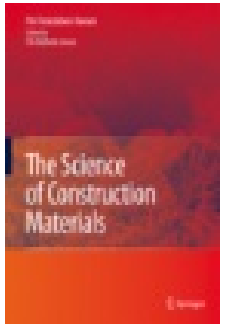












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TC 234-DUC Design Procedures for the Use of Composites in Strengthening of Reinforced Concrete Structures

Chair: Dr. Carlo PELLEGRINO Secretary: Dr. Josè SENA CRUZ

Continuous fiber-reinforced materials with polymeric matrix (FRP) and cementiciuos matrix (FRCM) are widely used for strengthening of civil structures.

Predictions of the various documents/guidelines are sometimes contrasting between themselves and disagreeing with experimental results related to particular applications.

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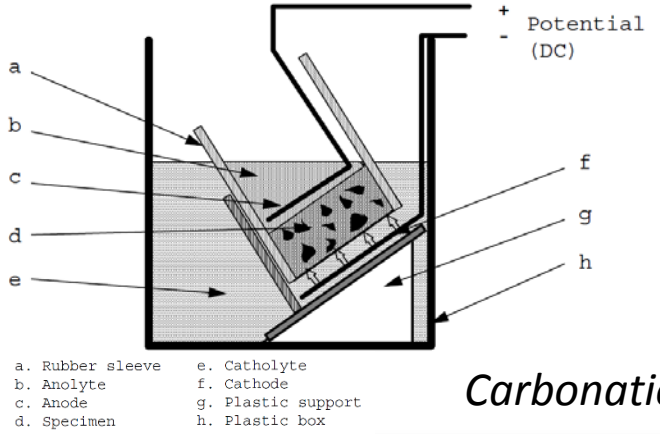
TC 247-DTA Durability Testing of Alkali-Activated Materials

Chair: Prof. John PROVIS Secretary: Dr. Frank WINNEFELD

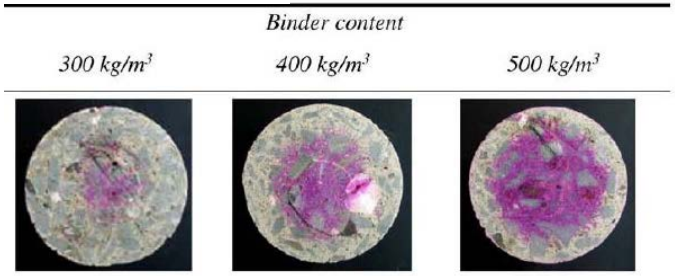
The development and use of new types of cement and concrete requires re-assessment of testing procedures, to enable us to accurately assess the performance of materials which are chemically different from Portland cement. This TC is assessing the methods available for durability testing of alkali-activated concretes through an international round-robin testing program.

Sulfate

Chloride

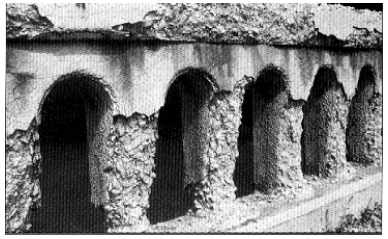


Carbonation



Alkali-Aggregate Reactions

Freeze-thaw



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TC 244-NUM Numerical Modelling

Chair: Prof. Klaas van Breugel Secretary: Prof. Wolfgang Brameshuber

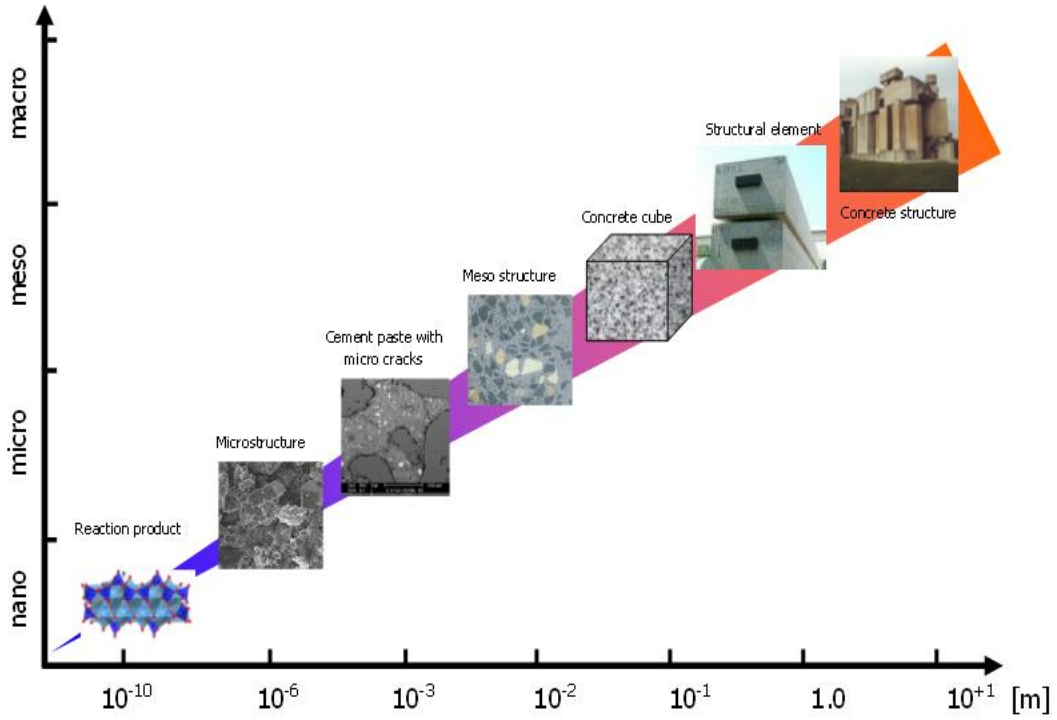
Task of TC 244: To consider, and reconsider, the evolution of numerical models and modeling of cementitious materials in science and engineering, given the present evolution of available computation power and advanced materials models.

Materials properties:

- Hydration processes
- Evolution of nano/microstructure
- Mechanical properties
- Transport properties

Modelling and application aspects:

- Type of models
- Multiscale modelling
- Accuracy and reliability
- Field of application of models



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TC (AAA) Avoiding Alkali Aggregate Reactions in Concrete Performance Based Concept *(2014 –2019)*

Chair: Prof. Børge Johannes WIGUM – Norcem R&D
Secretary: Dr. Jan LINDGÅRD - SINTEF

- **WP1: Accelerated performance testing in laboratory**
- **WP2: Link laboratory vs. field; exposure sites**
- **WP3: Assessment of detailed alkali household in concrete, including internal aggregate release, recycling and external supply**

International union of laboratories and experts in construction materials, systems and structures

American Concrete Institute
Always advancing

Discussions with ACI in Paris, 18 Sept. 2014

Bill Rushing, ACI President;

Ron Burg, ACI Executive Vice President

RILEM: Johan Vyncke, VP; Pascale Ducornet, SG; Nicolas Roussel, TAC Chair

- **Selected Points for Consideration:**
  - RILEM liaison member in ACI TCs
  - Reciprocal Membership at reduced rates
  - ACI - RILEM Joint Workshop on a specific technical topic (e.g. run joint sessions at ACI conventions, ACI and RILEM speakers; jointly publish session reports)
  - Explore potential synergies for ACI and RILEM running TC's