ACI Italy Chapter

Paolo Casadei, Member of the Board of Directors*

* Product Manager Structural Strengthening Division at KERAKOLL Group
ABOUT ACI ITALY CHAPTER (1)

• ACI Italy Chapter is among the 100+ chapters, equally subdivided between USA and abroad (26 in Canada and Latin America, 8 in Europe and 18 in Asia)

• ACI Italy Chapter was funded in 2003 by Professors Antonio Nanni (University of Miami, FL, USA) and Mario Alberto Chiorino (Politecnico di Torino, Italy), now Honorary President of the Chapter

• There are 15 members in the Board, 50% from the academy and 50% from the industry and design bureaus, beside the President

• The members of ACI I.C. are about 100, among them 5 supporting members from the industry (BASF Italia, Heidelberg-Calcestruzzi-Italcementi Group, General Admixtures, Kerakoll and Buzzi Group)

• Roughly 20% of the members are young members (fresh from PhD studies, PhD candidates and associate researchers)
ABOUT ACI ITALY CHAPTER (2)

PRESIDENT, ROBERTO REALFONZO - Associate Professor, University of Salerno, Dept. of Civil Engineering

VICE PRESIDENT, PAOLO RIVA - Full Professor. University of Bergamo, Dept. of Engineering and Applied Science

HONORARY PRESIDENT, MARIO ALBERTO CHIORINO - Professor Emeritus, Politecnico di Torino, Dept. of Structural, Building and Geotechnical Engineering

DIRECTORS

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Paolo Casadei, Product Manager Structural Strengthening Division - Kerakoll Group
Luigi Coppola, Associate Professor - University of Bergamo, Dept. of Engineering and Applied Science
Ciro Faella, Full Professor - University of Salerno, Dept. of Civil Engineering
Liberato Ferrara, Associate Professor - Politecnico di Milano, Dept. of Civil and Environmental Engineering
Marco Francini, Head of Technology and Research & Development – Buzzi Unicem S.p.A
Pietro Gambarova, Professor Emeritus - Politecnico di Milano, Dept. of Civil and Environmental Engineering
Gennaro Magliulo, Assistant Professor - University of Naples, Dept. of Structures for Engineering and Architecture
Emidio Nigro, Full Professor - University of Naples, Dept. of Structures for Engineering and Architecture
Francesco Santonicola, Laboratory Manager - Calcestruzzi S.p.A
Giuseppe Schlitzer, Manager - Federbeton
Ivana Torresan, Segment manager Admixtures and Cement Additives - BASF Contraction Chemicals Italia Spa
ABOUT ACI ITALY CHAPTER (3)

• **Initiatives at the national level**

Awards to PhD dissertations concerning structural and nonstructural cementitious materials, and R/C-P/C constructions

• **Initiatives at the national/international level**

Workshops on «New Boundaries of Structural Concrete» (2010, Salerno; 2011, Ancona; 2013, Bergamo; 2016 Capri (Naples); 2019, Milan)

• **Initiatives at the international level**

Workshops on «Durability and Sustainability of Concrete Structures» (2015, Bologna – Italy and 2018, Moscow – Russia)

• **Training Initiatives**

Professional courses for building-site and laboratory technicians
PhD Student Awards 2014 (1)

First Edition
Innovation in Concrete Structures and Cementitious Materials ⇒ 27 dissertations (2012-14)
SAIE – Building and Construction Exhibition 2014
(Bologna, Italy, October 23, 2014)

Three awards offered by Federbeton – Italian Federation of Cement Producers, under the supervision of ACI Italy Chapter

Proceedings edited by:
Roberto Realfonzo – President of ACI Italy Chapter
and
Pietro G. Gambarova – Member of the Board
PhD Student Awards 2014 (2)
PhD Student Awards 2016 (1)

Second Edition

Innovation in Concrete Structures and Cementitious Materials 2016 ⇒ 29 dissertations (2015-16)
SAIE – Building and Construction Exhibition 2016
(Bologna, Italy – October 19, 2016)

Three awards offered by Federbeton – Italian Federation of Cement Producers, under the supervision of ACI Italy Chapter

Proceedings edited by:
Roberto Realfonzo – President of ACI Italy Chapter
and
Pietro G. Gambarova – Member of the Board
PhD Student Awards 2016 (2)
The workshop was jointly organized by ACI Italy Chapter and by the Dept. of Civil, Chemical, Environmental and Materials Engineering of the University of Bologna, under the auspices of ACI Committee 201 (Proc. in ACI SP 305)
From the "old" to a "new" construction industry-sustainability design of structures
Koji SAKAI - Japan Sustainability Institute

Building toward a sustainable and resilient future
Julie BUFFENBARGER – Lafarge

New trends in service life design
Giuseppe MANCINI - Department of Structural, Geotechnical and Building Engineering, Politecnico di Torino

Prediction of service life of reinforced concrete by considering the initiation and the propagation periods
Carmen ANDRADE PERDIX - Institute of Construction Sciences “Eduardo Torroja” - CSIC

Structural Concrete in the Epoch of Sustainable Development
Vyacheslav FALIKMAN - Moscow State University of Civil Engineering (MSUCE)

Durability of concrete subjected to high temperature fields: continuum and discrete constitutive approaches
Guillermo ETSE - CONICET, National University of Tucuman
2nd Int. Workshop DSCS 2018

The workshop is organized by the American Concrete Institute Italy Chapter and the Russian Engineering Academy with the assistance of the Russian Academy of Sciences and the Russian Academy of Architecture and Construction Science.

The Workshop is co-sponsored by:
- American Concrete Institute and its Committees: C130 (Sustainability of Concrete), C201 (Durability of Concrete), C446 (Fracture Mechanics of Concrete - Joint ACI/ASCE), C544 (Fiber Reinforced Concrete), C549 (Thin Reinforced Cementitious Products and Ferrocement).
- fib (Federation for Structural Concrete)
- RILEM (International union of laboratories and experts in construction materials, systems and structures)

The Workshop is included in the ACI Ambassador Program
2nd Int. Workshop DSCS 2018 (2)

Organizing Committee
V. Falikman, Chair (Russia)
R. Realfonzo, Chair (Italy)
L. Coppola (Italy)
P. Hájek (Czech Republic)
P. Riva (Italy)

Local Organizing Committee
B. V. Gusev, (Chair)
A. I. Zvezdov
V. F. Stepanova
L. S. Barinova
Y. I. Kuznetsov
M. E. Leybman
V. I. Travush
A. Davidyuk

Honor Committee
M.A. Chiorino (Italy)
M. Collepardi (Italy)
B. V. Gusev (Russia)
K. Sakai (Japan)
S. P. Shah (USA)

Around 200 accepted abstracts

Important dates:
Submission of full papers: November 15, 2017
Paper acceptance notification: February 15, 2018
Submission of final papers: March 15, 2018

The full papers will be collected in an ACI Special Publication
### Tentative Program

**June 6th, 2017**

<table>
<thead>
<tr>
<th>Time</th>
<th>Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>08:30</td>
<td>Registration</td>
</tr>
<tr>
<td>09:00</td>
<td>Opening welcome</td>
</tr>
<tr>
<td>09:30</td>
<td>Keynote Lecture - N. Banthia</td>
</tr>
<tr>
<td>10:00</td>
<td>Parallel Sessions</td>
</tr>
<tr>
<td>11:30</td>
<td>Coffee break</td>
</tr>
<tr>
<td>12:00</td>
<td>Parallel Sessions</td>
</tr>
<tr>
<td>13:30</td>
<td>Lunch break</td>
</tr>
<tr>
<td>14:30</td>
<td>Keynote Lecture - H. Muller</td>
</tr>
<tr>
<td>15:00</td>
<td>Parallel Sessions</td>
</tr>
<tr>
<td>16:30</td>
<td>Coffee break</td>
</tr>
<tr>
<td>17:00</td>
<td>Parallel Sessions</td>
</tr>
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</table>

**June 7th, 2017**

<table>
<thead>
<tr>
<th>Time</th>
<th>Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>08:30</td>
<td>Keynote Lecture - R. Gettu</td>
</tr>
<tr>
<td>09:00</td>
<td>Keynote Lecture - S. Shah</td>
</tr>
<tr>
<td>09:30</td>
<td>Parallel Sessions</td>
</tr>
<tr>
<td>11:00</td>
<td>Coffee break</td>
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<tr>
<td>11:30</td>
<td>Parallel Sessions</td>
</tr>
<tr>
<td>13:00</td>
<td>Lunch break</td>
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<tr>
<td>14:00</td>
<td>Keynote Lecture - D. Hooton</td>
</tr>
<tr>
<td>14:30</td>
<td>Parallel Sessions</td>
</tr>
<tr>
<td>16:00</td>
<td>Coffee break</td>
</tr>
<tr>
<td>16:30</td>
<td>Parallel Sessions</td>
</tr>
<tr>
<td>18:00</td>
<td>Conclusion</td>
</tr>
</tbody>
</table>

11 sessions on DURABILITY  
10 sessions on SUSTAINABILITY  
2 sessions on FRC  
3 sessions on RETROFIT  
3 sessions on RECYCLE  
Other topics
Keynote Lectures:

Bio-Inspired Fiber Reinforced Concrete for the Next Generation Sustainable, Smart and Sleek Infrastructure

Nemkumar (Nemy) BANTHIA - Canada India Research Center of Excellence – ACI Ambassador Speaker

Ravindra GETTU - Industrial Consultancy & Sponsored Research Indian Institute of Technology Madras, India

Performance-based Concrete Design for Durability and Sustainability

R. Doug HOOTON - Chair of ACI Subcommittee 130-A, Secretary of ACI Committee 201, Durability of Concrete

Design approach and properties of a new generation of sustainable structural concretes

Harald S. MÜLLER - Immediate Past President of the International Federation for Structural Concrete

Nano-Engineered Meta Cement-Based Materials and Durability

Surendra P. SHAH - Center for Advanced Cement Based Materials Northwestern University Evanston, USA
1st, 2nd, 3rd, 4th Nat. Workshops NBSC (1)

New Boundaries of Structural Concrete

First edition
Salerno, April 2010

Second edition
Ancona, September 2011

Third edition
Bergamo, October 2013

Fourth edition
Anacapri, October 2016
Among the others, the workshop deals with the following topics:

- Performance and life-cycle costs of new concrete structures
- Controlled-performance concrete
- New scenarios for concrete
- On-site quality control of concrete
- Innovative strengthening systems for concrete structures
- Ultra High-Strength Concretes: ongoing projects and recent achievements

Future edition: Politecnico di Milano, 2019

The Call for Abstracts will be soon available
ACI Excellence in Concrete Award (1)

In the Spring 2016, ACI - Italy Chapter proposed the candidacy of Palazzo Italia (Italian Pavilion at the Expo 2015 – World Exhibition 2015, Milan) to the second edition of ACI Excellence in Concrete Construction Award - Category “Decorative Concrete” (Philadelphia, USA, October 25, 2016)

Construction Team Members

Owner: Expo 2015 Co.
Architectural Firm: Nemesi & Partners Ltd
Engineering Firm: Bms Progetti Ltd and Proger Co.
General Contractor: Italiana Costruzioni Ltd
Concrete Contractor: Styl-Comp Ltd
Cement Supplier: Italcementi Group

Michael J. Schneider

« [...] The project visit was very memorable. The structure is way more impressive in person than in pictures. Its award is certainly well deserved.»
Concrete International – October 2017
ACI Excellence in Concrete Award (2)

Palazzo Italia got both the first award in the category Decorative Concrete and the Excellence in Concrete Construction Award (25/11/2016)
ACI Certification Courses (1)

ACI Italy Chapter is the only European chapter recognized by ACI to certify (by means of on-line courses, laboratory tests and exams):

First-level technicians for concrete testing on site

- **Required skills:** mastery of the experimental procedures and paperwork related to testing cementitious materials at the fresh state (7 basic tests).

Concrete Construction Specialized Inspector – CCSI certificate

- **Required skills:** mastery of the procedures, operations and documents required to certify the inspections on R/C buildings according to the ongoing technical and safety norms.
## ACI Certification Courses (2)

**Concrete Field Testing Technician Grade I**

<table>
<thead>
<tr>
<th>Module</th>
<th>Section</th>
<th>Laboratory</th>
<th>Topics</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1.1</td>
<td>NO</td>
<td>Introduction and ingredients (cementitious materials, water, aggregates, chemical admixtures, fibers)</td>
</tr>
<tr>
<td></td>
<td>1.2</td>
<td></td>
<td>Properties (workability, time of setting, heat of hydration)</td>
</tr>
<tr>
<td></td>
<td>1.3</td>
<td></td>
<td>Properties (strength, resistance to freezing and thawing, permeability)</td>
</tr>
<tr>
<td>2</td>
<td>2.1</td>
<td>NO</td>
<td>Before construction (selection of properties and materials, mix design)</td>
</tr>
<tr>
<td></td>
<td>2.2</td>
<td></td>
<td>Construction (mixing, transporting, placing, finishing, curing and protection)</td>
</tr>
<tr>
<td></td>
<td>2.3</td>
<td></td>
<td>Durability and maintenance</td>
</tr>
<tr>
<td>3</td>
<td>3.1</td>
<td>YES</td>
<td>Temperature of freshly mixed hydraulic-cement concrete - Significance and apparatus</td>
</tr>
<tr>
<td></td>
<td>3.2</td>
<td></td>
<td>Temperature of freshly mixed hydraulic-cement concrete - Procedure and example</td>
</tr>
<tr>
<td></td>
<td>3.3</td>
<td>YES</td>
<td>Sampling freshly mixed concrete - Scope, procedure and example</td>
</tr>
<tr>
<td>4</td>
<td>4.1</td>
<td>YES</td>
<td>Slump of hydraulic-cement concrete - Significance and apparatus</td>
</tr>
<tr>
<td></td>
<td>4.2</td>
<td></td>
<td>Slump of hydraulic-cement concrete - Procedure and precision</td>
</tr>
<tr>
<td></td>
<td>4.3</td>
<td></td>
<td>Slump of hydraulic-cement concrete - Example</td>
</tr>
<tr>
<td>5</td>
<td>5.1</td>
<td>YES</td>
<td>Density, yield and air content (gravimetric) of concrete - Apparatus and procedure</td>
</tr>
<tr>
<td></td>
<td>5.2</td>
<td></td>
<td>Density, yield and air content (gravimetric) of concrete - Calculation</td>
</tr>
<tr>
<td></td>
<td>5.3</td>
<td></td>
<td>Density, yield and air content (gravimetric) of concrete - Example</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Module</th>
<th>Section</th>
<th>Laboratory</th>
<th>Topics</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>6.1</td>
<td>YES</td>
<td>Air content of freshly mixed concrete by the pressure method - Significance and apparatus</td>
</tr>
<tr>
<td></td>
<td>6.2</td>
<td></td>
<td>Air content of freshly mixed concrete by the pressure method - Procedure and calculation</td>
</tr>
<tr>
<td></td>
<td>6.3</td>
<td></td>
<td>Air content of freshly mixed concrete by the pressure method - Example</td>
</tr>
<tr>
<td>7</td>
<td>7.1</td>
<td>YES</td>
<td>Air content of freshly mixed concrete by the volumetric method - Significance and apparatus</td>
</tr>
<tr>
<td></td>
<td>7.2</td>
<td></td>
<td>Air content of freshly mixed concrete by the volumetric method - Procedure and calculation</td>
</tr>
<tr>
<td></td>
<td>7.3</td>
<td></td>
<td>Air content of freshly mixed concrete by the volumetric method - Example</td>
</tr>
<tr>
<td>8</td>
<td>8.1</td>
<td>YES</td>
<td>Making and curing concrete test specimens in the field - Apparatus</td>
</tr>
<tr>
<td></td>
<td>8.2</td>
<td></td>
<td>Making and curing concrete test specimens in the field - Casting and curing</td>
</tr>
<tr>
<td></td>
<td>8.3</td>
<td></td>
<td>Making and curing concrete test specimens in the field - Example</td>
</tr>
<tr>
<td>9</td>
<td>9.1</td>
<td>YES</td>
<td>Bulk density and voids in aggregate - Terminology and apparatus</td>
</tr>
<tr>
<td></td>
<td>9.2</td>
<td></td>
<td>Bulk density and voids in aggregate - Procedure and calculation</td>
</tr>
<tr>
<td></td>
<td>9.3</td>
<td></td>
<td>Bulk density and voids in aggregate - Example</td>
</tr>
<tr>
<td>10</td>
<td>10.1</td>
<td>NO</td>
<td>Ready-mixed concrete - Materials, ordering information and workability</td>
</tr>
<tr>
<td></td>
<td>10.2</td>
<td></td>
<td>Ready-mixed concrete - Air-entrained concrete, measuring materials, batching plant and mixing</td>
</tr>
<tr>
<td></td>
<td>10.3</td>
<td></td>
<td>Ready-mixed concrete - Delivery, test on fresh concrete, mechanical performances</td>
</tr>
</tbody>
</table>

**Online lessons will be available for e-learning courses**

**ACI International Forum**
Thank you for your attention!

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aciitalychapter@gmail.com