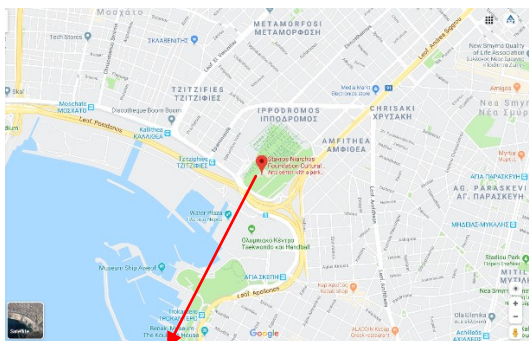




Stavros Niarchos Foundation Cultural Center
Athens, Greece

Workshop Location:

Stavros Niarchos Foundation Cultural Center is located at Syggrou Avenue 364, Kallithea (Athens). There is a shuttle bus from Syntagma Square according to a predefined schedule. Also, there is bus or trolley from Syntagma Square which crossed Syggrou Avenue too. Finally, there is Tram connection from Palaio Faliro area. Further detailed information will be provided upon your registration.



37° 56' 22" N / 23° 41' 29" E

Accommodations:

Suggested areas for booking a hotel:

1. **Around Syntagma Square**
2. **Along Syggrou Avenue**
3. **Palaio Faliro (along Poseidonos Avenue)**

Registration Information

Contact Vera Aggelousi

By phone: +30-26510-94676
By fax: +30-26510-94676
By email: vagelous@geotest.gr
By mail: Geotest SA,
6 km N.R. Ioanninon-Athinon
Greece, 45500

Download registration form and detailed workshop schedule from our Webpage:

<http://www.germann.org>

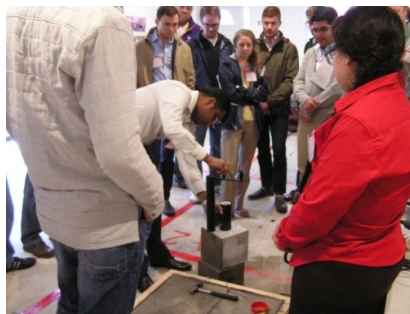
Registration must be received at least 30 days before the workshop.

Fees:

€700 per person
€600 per person (early registration until 20 Oct)
€600 per person if two or more are from same organization
€400 per student (ID required)

Conditions and Terms of Payment:

Payment must be received at least 25 days before the start of the workshop. If a registrant cancels or cannot attend the workshop after payment, no refund will be made. Those funds will be credited towards the next workshop. Should the workshop be cancelled by Germann Instruments after payment is made, received funds will be returned or credited towards the next workshop.



Test Smart — Build right

Educational Workshop

CONCRETE SCIENCE & ADVANCED METHODS FOR EVALUATION OF CONCRETE

November 20-22, 2019

Germann Instruments & Geotest S.A.

**Stavros Niarchos Foundation Cultural
Center
Athens, Greece**

Instructors:

Dr. Nicholas J. Carino

Mr. Claus Germann Petersen

Mr. G. Rapaport

Mr. H. Orozco

Mr. A. Mozcko

Mr. A. Gotzamanis

Attendees will after the workshop receive a signed Diploma of Attendance

Limited to 30 attendees per workshop

CONCRETE SCIENCE & ADVANCED METHODS FOR EVALUATION OF CONCRETE

This 3-day workshop is for persons wishing to enhance their understanding of basic concrete science and traditional and advanced methods for evaluation of concrete and concrete structures. The workshop includes lectures and demonstrations covering the full range of systems used worldwide. Similar workshops have received excellent reviews from international audiences. Germann Instruments is pleased to offer the same workshop to the Americas.

Workshop Objectives:

- Review basic concepts of concrete science
- Familiarize engineers with available test methods and test systems for evaluation of reinforced concrete structures.
- Review the principles and capabilities of selected nondestructive and in-place tests for evaluation of reinforced concrete.
- Review other advanced test methods
- Review of Visual Inspection rating systems for concrete structures and MATI® software.

Workshop materials:

Participants will receive copies of presentation materials, ACI 228.1R, and ACI 228.2R.



Workshop Topics:

Evaluation of in-place concrete strength

- Core testing
- Rebound hammer
- Pullout test (LOK-Test, CAPO-Test)
- Pull-off test (BOND-Test)
- Maturity method (COMA-Meter)

Flaw detection based on stress waves

- Ultrasonic pulse velocity (PUNDIT, Surfer)
- Impact-echo method (DOCTer)
- Impulse-response method (s'MASH)
- Ultrasonic-echo method (MIRA)

Location of reinforcement

- Covermeters (CoverMaster)
- Ground penetrating radar (Conquest)

Evaluation of reinforcement corrosion

- Durability principles
- Water penetration (GWT)
- Chloride content (RCT & RCT/W)
- Carbonation (Deep Purple, Rainbow)
- Chloride profile (Profile Grinder)
- Service life estimation
- Half-cell potential (Mini Great Dane)
- Corrosion rate (GalvaPulse)
- Concrete conductivity (Merlin)
- Rapid chloride penetration (PROOVE'it)

Advanced test methods

- Air-void characteristics (AVA)
- Heat of hydration (HeatBox)
- Concrete rheology (ICAR Rheometer)
- Autogenous shrinkage (Auto-Shrink)

Instructors:



Dr. Nicholas J. Carino is an internationally recognized expert and educator on NDT and standard test methods. He retired from NIST after 25 years of service and is an independent consultant. He has served in many leadership positions on ACI and ASTM Committees. Dr. Carino received many awards from ACI and ASTM for his contributions in research and standards development. He is an Honorary Member of ACI and a Fellow of ASTM.



Mr. Claus Germann Petersen is President of Germann Instruments, one of the world's leading suppliers of advanced concrete test systems. He is the inventor of numerous test systems that are used worldwide. Mr. Petersen is dedicated to spreading knowledge on the capabilities and benefits of advanced test systems. He has been an active member in the NDT Committees of ACI, ASTM, and RILEM, and is the recipient of the Professor Ostenfeld Gold Medal from the Danish Society for Structural Science and Engineering.



Mr. Guy Rapaport is a Civil Engineer acting at present a leading consultant, NDT-manager and project manager in Ramboll Finland Oy. He has an extended field experience with use of NDT equipment in several structures such as bridges, slabs on ground etc. He is specialized in bridge special inspections, evaluation of bridge deck surface structures and condition of post tensioned bridges. He is a certified Bridge Inspector from Finnish Transport Agency.