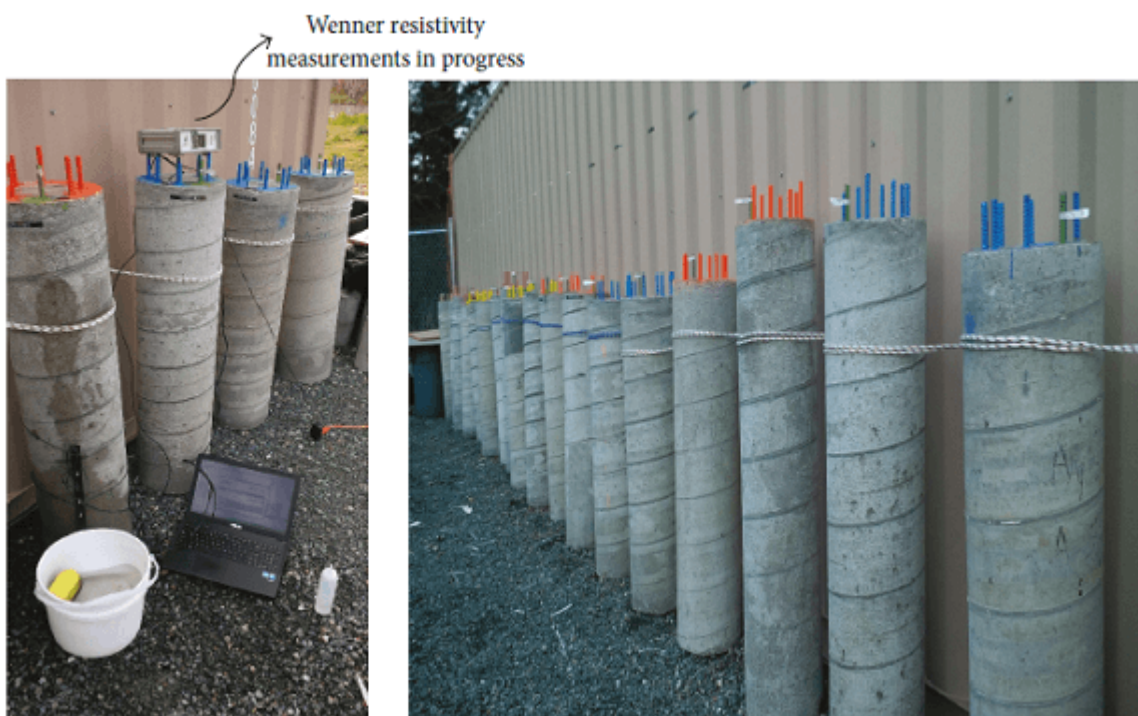


It is now the best time to upgrade your research lab facility with smart concrete testing devices, NDT tools, and sensors. Take advantage of the **15% academic discount**. Offers end **September 30th!**

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A Dive Into Electrical Resistivity of Concrete for Durability Evaluation

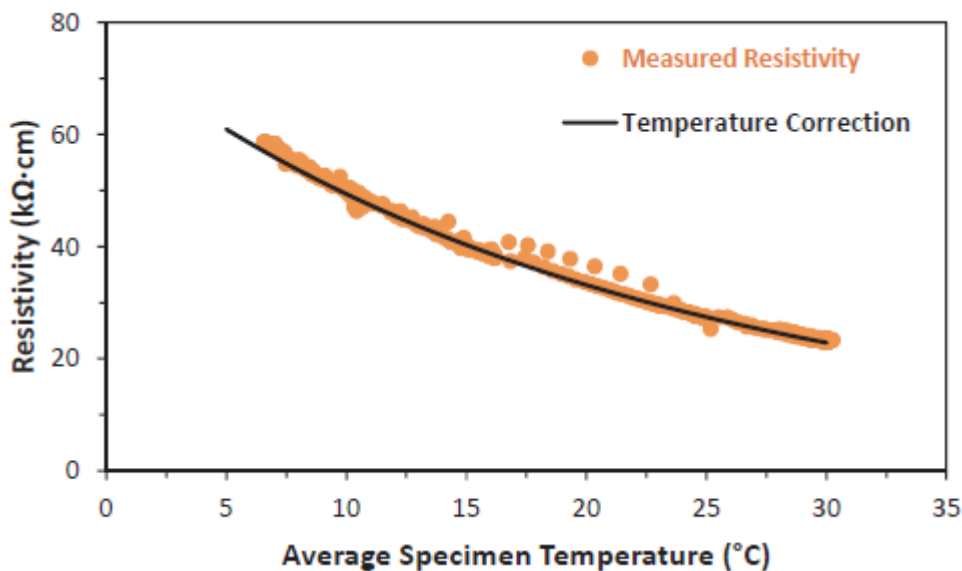


Researchers leverage the recent innovations in smart NDT technologies to resolve some of the challenging topics in the field of concrete durability. Electrical resistivity measurement, for example, has proven to be a very fast and accurate method in the assessment and monitoring of concrete cracking, setting time, and freezing/thawing.

In a recent article, Azarsa and Gupta offer a comprehensive review of the application of the electrical resistivity method in the evaluation of concrete durability. Using the **Giatec Surf**

device, they conducted an interesting study looking at the relationship between surface electrical resistivity and rebar corrosion in concrete columns. [Read more here](#)

Using RCON2™ to Measure the Influence of Temperature on Electrical Properties of Concrete



Electrical resistivity measurements are influenced by variations in concrete temperature and humidity. In a recent article published by Dr. Jason Weiss's group, the **Giatic RCON2** device was utilized to develop a method for the measurement of the activation energy of conduction, and use that in determining the temperature correction for the resistivity measurements. [Read the article here](#)

Queen's University Uses SmartBox to Measure The Effects of Thermal Cycling on Electrical Resistivity of Concrete



Monitoring the behavior of concrete during various stages of the freeze and thaw cycles can be challenging. A recent project at Queen's University utilized Giatec SmartBox wireless resistivity sensor to study the early age electrical resistivity behaviour of various concrete mixtures subject to low temperature cycling. [See the Project Here](#)

Products

[SmartBox](#)

A compact wireless device to measure and monitor the electrical resistance of fresh concrete.

[iCOR](#)

NDT device that detects and measures the corrosion rate in reinforced concrete structures without the need to have electrical connection to rebar.

XCell

Wireless half-cell corrosion potential mapping. (ASTM C876)

Perma 2

Compact laboratory test device that measures the resistance of concrete against chloride penetration. (ASTM C1202)

RCON 2

Laboratory test device that utilizes an advanced variable frequency technique for bulk electrical resistivity measurement.

Surf

Laboratory test device to measure surface resistivity of concrete based on the four-probe (Wenner-Array) technique.

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