

LAB PRESENTATION

SISCON - SAFETY OF INFRASTRUCTURES AND CONSTRUCTIONS

Director: Prof. B.M. Chiaia

<https://www.polito.it/ricerca/centri/siscon/index.php?lang=en>

- List of possible activities in your lab

SISCON provides **cutting-edge structural monitoring equipment** (acoustic and ultrasonic emissions, X-ray diffractometer, THz-TDS laser spectrometer, Digital Image Correlation, accelerometers for dynamic identification, deformation sensors, and inclinometers), **an innovative chemical / physical laboratory** for the chemical characterization of concrete, steel and metals, and several **tools for the rheological control of concrete** (3D printing and extrusion).

The Center also has exclusive equipment in Italy for testing **real-size structural elements** with lengths of up to 30 meters, which can be performed using **a modular and transportable steel reaction frame** (equipped with a load application systems with 4 actuators of 1200 kN each).



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Description: SISCON is the Multidisciplinary Center of the Politecnico di Torino, founded in 2018 with the aim of providing an univocal and interdisciplinary solution to the **problem of infrastructure and building safety**. The Center includes over **40 professors** coming from 4 different Departments of the Politecnico di Torino.

Scope & Market: the Center offers its facilities to **Construction Companies**, to the public **Institutions (also deputed to surveillance)**, as well as to the major public and private **Concessionaires** of the national road and railway networks, (MIMS Ministry, MIUR, ASPI, ANAS, SITAF, RFI, TELT, Municipality of Turin and others). The Center has established research collaborations with many important leading companies in the construction sector (Buzzi-Unical, Mapei, Italcementi, etc.).

Innovation & Benefits: The main prerogatives of SISCON include multidisciplinary skills, international contacts and synergy with the main Italian operators of infrastructures and constructions, as well as the ability to conduct experimental tests at the micro, macro, and meso scales. In all activities, focus on technological innovation is pursued.