



# NRFIS

## National Research Facility for Infrastructure Sensing

*UKCRIC's Facilities Showcase*

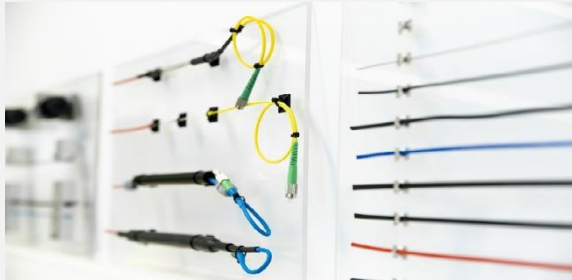


UNIVERSITY OF  
CAMBRIDGE



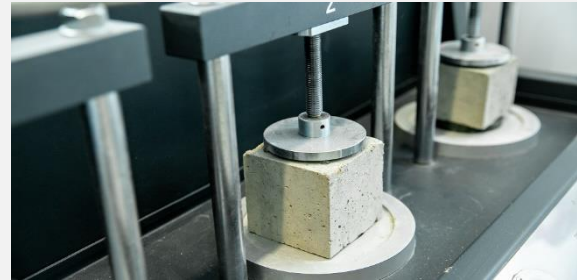
UKCRIC

# NRFIS Facilities



## Sensor Development

- [Novel Prototyping Laboratory](#)
- [Sensor Maintenance Laboratory](#)
- [Vibration Isolation Sensor Laboratory](#)
- [Smart Infrastructure and Construction Laboratory](#)



## Structures

- [Advanced Structures Laboratory](#)
- [Structural Materials Laboratory](#)
- [Structures Laboratory](#)
- [Computational Structures Mechanics](#)
- [Material Testing and Characterisation Laboratory](#)
- [Concrete Manufacturing and Durability Laboratory](#)
- [Concrete Innovation Laboratory](#)



## Geomechanics

- [Geomechanical Laboratory](#)
- [High pressure/temperature specimen testing](#)



## Construction Engineering

- [Construction IT Laboratory](#)

# NRFIS Equipment



**Over £5m of equipment is available, easy to access and technically supported.**

**Facilities overview**

- Laboratories

**Facilities**

- Laboratories

**About NRFIS**

**Work with us**

**News and Events**

**Contact Us**

The UKCRIC National Research Facility for Infrastructure Sensing accommodates the following purpose built facilities to enable cutting edge research in the development and application of novel sensor systems at a range of scales.

**Sensor Development**

- Novel Prototyping Laboratory
- Sensor Maintenance Laboratory
- Vibration Isolation Sensor Laboratory
- Smart Infrastructure and Construction Laboratory

**Structures**

- Advanced Structures Laboratory
- Structural Materials Laboratory
- Structures Laboratory
- Computational Structures Mechanics
- Material Testing and Characterisation Laboratory
- Concrete Manufacturing and Durability Laboratory
- Concrete Innovation Laboratory

**Geomechanical**

- Geomechanics Laboratory
- High pressure/temperature specimen testing

**Construction Engineering**

- Construction IT Laboratory

To read more about the equipment available in the laboratories and workshops the facilities at NRFIS are available for use by industry and academic organisations and interdisciplinary research for UK infrastructure. To find out more about our

**Smart Infrastructure and Construction Laboratory**

The Smart Infrastructure and Construction Laboratory supports the development of new data analysis undertaken by the Centre for Smart Infrastructure and Construction (CSIC) sensors, data analysis and interpretation, and smart city systems. CSIC develops tools provide a powerful platform for delivering data that enables smarter and proactive construction of new infrastructure and for existing structures.

**Key equipment:**

- Fibre optic spectrum analyser
- Lock Electro-mechanical testing machine
- Environmental (climate) test chamber
- Acoustic emission acquisition and analysis system

**Spectrum analyser**

**Model:** LUNA 5200A S101  
**Series:** LL-10V

**Reference:** LL-10V

**Specifications:** Rearward fibre optic viewing interrogator capable of recording dynamic distributed strain measurements at a high spatial resolution (4.0 mm), with a maximum frequency of 10 Hz.

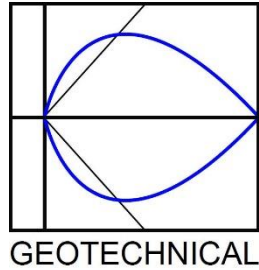
**Key Features:**

- Multi-chamber measurements of strain
- Full-frame system with 20m length cables
- Includes over 200,000 measurement locations
- Ability to create and key custom sensors (e.g. silica based single mode optical fibres)

Interested in using our equipment? Existing users can book through our online booking system, while new users can request access by filling out the [Acoustic Emission Request form](#).

# Research at NRFIS

**CSIC** Cambridge Centre for  
**Smart Infrastructure  
& Construction**



 LAING O'ROURKE CENTRE  
for CONSTRUCTION ENGINEERING  
and TECHNOLOGY

 **structures**  
RESEARCH GROUP



# Working with NRFIS



Academic Lead

**Giulia Viggiani**



Senior Technical  
Manager

**Pieter Desnerck**



Senior Project  
Manager

**Shelley  
Arora-Tailby**

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