

GeoSIG Solution Centre Structural Analysis Consultancy

What can be monitored?

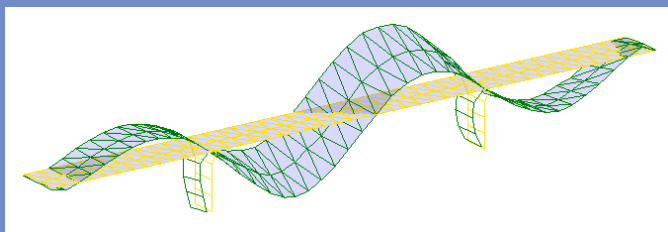
- ✓ Bridges
- ✓ Viaducts
- ✓ High-rise, High-profile Buildings
- ✓ Historical Monuments
- ✓ Arenas, Stadiums, Roofs
- ✓ Tunnels

What are the Features and Benefits?

- ✓ Rapid assessment of a structure's health
- ✓ Reliable data on actual condition of structure
- ✓ Detect early signs of failure
- ✓ Protect lives and integrity of property
- ✓ Live monitoring
- ✓ Optimise insurance and maintenance costs
- ✓ Assess structure's safety following a major event
- ✓ Additional credit for your structure
- ✓ Achieve compliance with building codes

Professional Advice and Support from concept to deployment

The justification for Structural Health Monitoring is quite clear and speaks for itself. The alternative is visual periodic inspections, which is yesterday's technology and is less likely to produce the same features and benefits. High value and complex structures without an advanced monitoring solution are at a risk that can be mitigated quite effectively. Even very complex monitoring needs can be supported with the assistance of internationally renowned structural health expert Dr Farzad Naeim, who holds licenses in structural engineering, professional civil engineering, member of the California Bar and Patent Attorney. He's literally written the book on the subject.



With some complex structures, due to size or shape, it is more difficult to determine which instruments are needed or where they should be installed for efficacy. However, expert structural analysis is available. GeoSIG — through a strategic alliance with **Dr Farzad Naeim**, the renowned expert in structural health monitoring — can offer consultancy and turnkey solutions for structural health monitoring of all types of structures including high-rise buildings, public buildings, bridges, tunnels and other special structures. Using the expertise of the highly respected [Dr Farzad Naeim](#), who boasts over 30 years' experience and publications ranging from textbooks to journal papers, you can have peace of mind that your structure is safely surveyed and the most reliable solution is specified. GeoSIG, with more than 25 years' expertise in structural monitoring solutions, can fulfil the requirements of the most challenging structure.

Contact us for a comprehensive consultation and discussion on your Structural Monitoring requirements.

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OUR SERVICES

Advice

Consulting

Technical Proposal

Financial Offer

Planning

Installation

Training



What can be measured?

There are a host of options for measuring the changes in a structure. Each project will have its own unique requirements. Dr Naeim will assess such requirements, for which our experts can then provide the appropriate solution.

The most widely used packages for Structural Monitoring:

1. **Vibration:** Structural health, behaviour and modal analysis, comfort index
2. **Strain:** Fatigue and rain-flow analysis
3. **Displacement:** Joints, cracks and differential settlements of foundations
4. **Environment:** Wind speed and direction, humidity, and temperature
5. **Tilt:** With reference to allowable limits

We provide expert advice and an integrated approach that can help you achieve your
Monitoring Requirements

Structural Monitoring Principles

Every structure is unique due to the material used, type of structure, shape, size, age, its foundation, geographic location and other factors. In order to have an effective and comprehensive monitoring solution, the objectives of the building owner with reference to the building criterion will be considered to provide a cost effective structural monitoring solution.

Having the expertise and in-depth knowledge offered by Dr Naeim, coupled with a diverse range of hardware solutions offered by GeoSIG, the respected client can have the peace of mind that the proposed structural monitoring solution is tailored and customised without compromising on the monitoring objectives.

The third element being a comprehensive and highly proprietary featured software package would ensure that the most demanding requirements can be catered for providing periodic management reports and warnings as when the structure may need attention or intervention for maintenance.

A structural monitoring solution offered by Dr Naeim and GeoSIG will provide full confidence for the owner of the structure knowing their highly valuable asset is monitored 24/7, and in the long run their investment can save lives and minimise costly repairs. After an earthquake, the owner of structure — with the help of the provided reports — can judge whether the structure is safe or repairs are required. Being able to show the damage can help with speedy recovery and insurance claim settlements.

Contact GeoSIG to discuss your structural monitoring requirements.

Analysis Capabilities

A typical solution expertly specified will provide valuable information about the health of the structure. Thresholds for acceptable changes in the structure could be set to provide automatic notifications. After a natural disaster or heavy construction work around the structure, valuable information about the change in structural behaviour can be provided at an instant. Insurance claims due to any damages to the structures can be settled based on credible evidence.

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