

AIDA-SHM

Artificial Intelligence Data Analyser Structural Health Monitoring

AIDA-SHM AIDA-SHM is a turnkey system to monitor the integrity of structures such as bridges and viaducts, predict structural damage and allow the optimization of preventive maintenance, in order to reduce the costs of highly specialized personnel. The AI engine of AIDA-SHM uses powerful artificial intelligence algorithms to extract information, discover associations and correlations between data and events and define representative models of the evolution and deterioration of structures; it differs profoundly from the paradigm of statistical analysis, which defines probabilistic models based exclusively on the frequency of events. The highly innovative elements of AIDA-SHM are: 1) use of the passive acoustic emission technique; 2) analysis of the acoustic signal and all other parameters through an automatic learning engine (Artificial Intelligence - AI); 3) connection of the sensors through a satellite IoT network.



Acquisizione

Trasmissione

Integrazione, analisi ed elaborazione

Azione



Application fields:

- Structural monitoring of viaducts
- Structural monitoring of buildings
- Structural monitoring of cultural heritage
- Measurement of the aging of reinforced concrete
- Support for structural measures
- Geological instability monitoring
- Support for early seismic warning



AIDA-SHM manages:

- sensors data: Acoustic Emission, temperature, vibration, humidity, position, air composition, noise, light, fire, water, infrared, imaging, displacement;
- regional data: position, altitude, terrain, design, geo-location;
- historical data: age, restructuring, structural variation, damage.



AIDA-SHM



Artificial Intelligence



Research and Development

Project Consulting works continuously in collaboration with the scientific community and with other specialist companies in order to bring technological innovation to the territory

