

# **Democratizing Structural Health Monitoring: Low- and No-Cost Solutions with QGIS and MyShake**

Structural health monitoring (SHM) is critical for infrastructure safety, yet traditional methods are often costly and complex. This talk introduces two accessible SHM solutions: the MyShake smartphone app for no-cost monitoring and the Quake Structural Integrity System (QGIS) for low-cost deployments. MyShake leverages smartphones to measure natural frequencies and damping ratios of buildings, providing a scalable, community-powered SHM approach. QGIS integrates low-cost MEMS accelerometers with cloud computing to deliver real-time seismic and structural data. Together, these technologies represent a new era of SHM, prioritizing accessibility, scalability, and actionable insights for safer communities.