

The Dragon-6 Project Multi-Sensor Remote Sensing for Cultural Heritage Climate Change Resilience

Timo Balz¹, Gino Caspari², Rosa Lasaponara³, Fulong Chen⁴, Jinghui Wang⁵, Bihong Fu⁴

- 1) *State Key Laboratory of Information Engineering in Surveying, Mapping and Remote Sensing (LIESMARS), Wuhan University, China*
- 2) *Institute of Archaeological Sciences, University of Bern, Switzerland*
- 3) *IMAA-CNR, Italy*
- 4) *Aerospace Information Research Institute, Chinese Academy of Sciences (AIR-CAS), China*
- 5) *College of Mining, Guizhou University, China*

The Dragon-6 project Multi-Sensor Remote Sensing for Cultural Heritage Climate Change Resilience investigates the application of remote sensing technologies to improve the resilience of cultural heritage sites confronting increasing threats from climate change. Numerous UNESCO World Heritage Sites and other significant archaeological locations remain vulnerable to climate-induced hazards, including flooding, permafrost degradation, desertification, intensified storm activity, etc.

Remote sensing remains indispensable for the systematic monitoring of these risks. This project seeks to bridge methodological gaps by deploying advanced multi-sensor remote sensing approaches. Principal study areas are the Wushaoling, Jiayuguan, and Hongguozi sections of the Great Wall in Gansu Province and the Ningxia Hui Autonomous Region, rapidly retreating ice patches in the Mongolian Altai, riverine zones in Alaska subject to rising temperatures and accelerated erosion, and the archaeological landscape of Metaponto, Italy, which confronts multiple concurrent climate-related stressors.

Fieldwork is supposed to be conducted after the project is financed. Through this initiative, we demonstrate the contribution of remote sensing to global efforts in monitoring, safeguarding, and enhancing the climate resilience of vulnerable cultural heritage.