**Research title**

Traditional and modern integration methods of the improvement of the preservation of the historical environment of Khiva using BIM, GIS and VAR

**Abstract**

Aged for 2500 Ichan-Kala Ensemble of Khiva city (under UNESCO heritage list), which includes nearly 350 historical objects, buildings, structures, are under threat, due to the environmental (Aral Sea), biological (erosion, salty ground, high water level) and mechanic issues. They can be destroyed anytime.

In order to create data basis of those buildings starting from a **GIS** (Geographic Information System) map, it should be used new technologies, as in Uzbekistan rarely utilized, or not used yet. It should be documented and created in detail by **BIM** (Building Information Modeling) models working with correct LODs (Level of Detail), while the architectural heritages are unharmed for now. Moreover, **VAR** (Virtual and Augmented Reality) will be use to optimize data visualization for different end users.

Developing **scientific guidelines** for studying and applying the traditional construction rules, which are used in the architecture of medieval Khiva (Khorezm).

For the first time the influence of landscape design on the formation of the artistic aspects of Khiva khanate architecture is being studied; BIM technologies are being integrated for the historical objects of Uzbekistan in an integrated way with GIS and VAR.

