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CLIMATE SENSITIVITY OF TRADITIONAL UZBEK ARCHITECTURE

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Climate sensitivity of traditional Uzbek cities and buildings are mostly organized according to local climate. The main focus on open spaces, streets and courtyards came out from the characteristics of urban density and morphology. Sun controlling and ventilation along the selection of construction materials represent issues of climate sensitivity. Morphology of urban design in Uzbekistan is characterized by a framework of streets and squares, which cut through dense and low buildings. From the point of climate sensitivity direction and density of the streets network, one of the important factors, density of building structures and networks of streets produce important effect to microclimate of open spaces. We can observe that greater density contribute to lower solar irradiation with more temperature stability. In traditional Uzbek architecture main streets orientation often depend on direction of the fresh breezes from mountain. With this solution, inhabitants of houses take advantage of natural ventilation. From the point of irradiation, main alignment is North-south, which enables better use of solar radiation in winter time and better sun protection in summer. Historical observation show that this principles derived from ancient Central Asian cities with their North-south axes, and from Islamic cities with their narrow streets and systems of ventilation. Application of these principles in Uzbek urban design resulted in building fabric of cellular structure carved into public and private spaces.

Biography

Orif Khaitov graduated from Samarkand State Architectural and Civil Engineering Institute. In 2015, he obtained admission for PhD Program at Samarkand State Architectural and Civil Engineering Institute.

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