

Second Laureate Invention & Innovation



- **Research Work Title:** Designing Tabiat Pedestrian Bridge
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- **Collaborators:** Alireza Behzadi & Sahar Yasaei
- **Collaborator Organization:** Maffeis Engineering



Abstract:

Tabiat Bridge is a 270 meters long, pedestrian bridge connecting two public parks, spanning over Modarres Highway in Tehran. This bridge is designed to be a place to stay rather than just to pass, so there are seating areas and green spaces everywhere on the bridge, also restaurants on the lower level, all designed in order to have enough means to make the people stay on it. It is designed on a curved path with variable width and changes in slopes which slows down the users and creates a sense of mystery about the destination. Since the site was full of trees, the number and location of columns were designed in a way to have minimum footprint on the ground and the existing nature. The structural concept was to have a spatial structure large enough to create an inhabitable and architectural space. The result was a dynamic three dimensional steel truss with two continuous deck levels that sits on three columns. All the levels are connected to each other by stairs and ramps, providing multiple paths throughout the bridge, creating different ways to experience the bridge. It was constructed by thousands of steel pipes all welded on site in 40 meters above the highway, which made the construction process very challenging. Creating such complex steel structure was unprecedented in Iran. Contrary to most of the bridges which are designed to be crossed, here the bridge was re-defined and by itself has become a destination. It is an inclusive free to use public space which allows all the people of the community to use and enjoy it freely and watch their city from a new perspective. This project is significant not only from technical points of view but also from social and environmental and urban design points of view.

