

## Applications of Artificial Neural Networks in Civil Engineering

**Authors :** Naci Büyükkaracıgan

**Abstract :** Artificial neural networks (ANN) is an electrical model based on the human brain nervous system and working principle. Artificial neural networks have been the subject of an active field of research that has matured greatly over the past 55 years. ANN now is used in many fields. But, it has been viewed that artificial neural networks give better results in particular optimization and control systems. There are requirements of optimization and control system in many of the area forming the subject of civil engineering applications. In this study, the first artificial intelligence systems are widely used in the solution of civil engineering systems were examined with the basic principles and technical aspects. Finally, the literature reviews for applications in the field of civil engineering were conducted and also artificial intelligence techniques were informed about the study and its results.

**Keywords :** artificial neural networks, civil engineering, Fuzzy logic, statistics

**Conference Title :** ICSRD 2020 : International Conference on Scientific Research and Development

**Conference Location :** Chicago, United States

**Conference Dates :** December 12-13, 2020