

## INSPIRATIONS IN FOOTBRIDGE DESIGNING

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### Summary

The paper presents a few examples of designed and constructed bridges which were inspired by quite strange prototypes from nature and even the history or the philosophy. It shows how it is important to establish a good cooperation between the architect and the structure engineer.

**Keywords:** footbridge; aesthetic; structural concepts; planning.

### 1. Introduction

We seek inspiration all our life. Every day we have thousands of thoughts which may become inspiration for us. We use our senses: we look, hear, feel, think... We look around and see the nearest object or surroundings and suddenly an idea for a new object or piece appears. Inspiration is a driving force for all our civilisation. It makes thousands of people work on new projects and solutions, and the visionaries push the world forward.

This includes also bridges, and especially footbridges. The paper presents a few examples of designed and constructed bridges and footbridges which were inspired by quite untypical patterns from nature, and even history or philosophy. It shows how important for achieving a success it is to establish a good cooperation between the architect and structural engineer. The experience shows that it often requires a lot of effort from the whole team.

### 2. What is an Inspiration

Inspiration (Latin, *inspiratio*) i.e. afflatus, willingness to act, enthusiasm to create, somebody else's suggestion or opinion affecting the behaviour of the inspired person. Creative activity is subject to continuous change. It is always preceded by inspiration resulting in new quality of creation. As creative activity is a reflection of our internal experience, it may represent us ourselves. The self we manifest inspires us to creatively experience our life. Inspiration pushes us forward.

Inspirations in designing bridges may be divided into two kinds: those which are directly derived from the already constructed objects and those which are totally unrelated to such objects. Both are of vital importance and have a considerable impact on a designer.



Gustave Eiffel

Thomas Telford

Eugene Freyssinet

Robert Maillart

Fritz Leonhardt

Christian Menn

Santiago Calatrava

Fig. 1 Great figures and visionaries who can inspire other bridge designers

Inspiration which comes directly from the existing bridges is nothing else than inspiration which we usually draw from other designers. Every structural engineer or architect with some experience and orientation in the world of engineering