

## The new Juventus Stadium in Turin

### Massimo MAJOWIECKI

Professor  
IUAV University  
Venice, ITALY  
*massimo.majowiecki@majowiecki.com*

Massimo Majowiecki, born 1945, received his civil engineering degree from the University of Bologna. Actually is Professor of Structural Architecture in IUAV, University of Venice

### Francesco OSSOLA

Professor  
Politecnico di Torino  
ITALY  
*info@studio-ossola.it*

Francesco Ossola, born 1947, received his civil engineering degree from the Polytechnic of Turin, Italy. He is a tenured professor at the pPolytechnic of Turin in Construction Ergotechnics.

### Stefano PINARDI

Civil Engineer  
Studio Tecnico Majowiecki  
Casalecchio di Reno (BO),  
ITALY

*stefano.pinardi@majowiecki.com*

Stefano Pinardi, born 1966, received his civil engineering degree from the University of Bologna, Italy. He works for Studio Tecnico Majowiecki, Casalecchio di Reno (BO) Italy

## Summary

After about 19 years the “delle Alpi” Stadium of Turin (Italy), builded for Italia '90 WorldCup is going to be substituted by a new stadium named “Nuovo Stadio Juventus” designed according newer and actual guidelines for stadium and sport's arena utilization.

Scope of this paper is to show the adopted architectural and structural design approach

The paper illustrates principally:

- 1) foundation system;
- 2) grand stand frames;
- 3) suspended roof structural system;

The design has been assisted by experimental testing procedures in boundary wind tunnel laboratories.

**Keywords:** Sport Arena, Soccer Stadium, New Juventus Stadium, suspended steel roof, experimental testing in boundary wind tunnel

## 1 Introduction: description of structural design

Structural solution is characterized by a suspended steel roof with stays appended to two-legs post at each side and grand stand system (with concrete frames until level +18.55m and steel frames for the higher level until the external roof supports (+33.00m)).

### 1.1 Foundations system

