



## **FOOT PRESSURE MAPPING IN SPORT: FROM THE BASICS OF SCIENCE AND TECHNOLOGY TO PRACTICAL APPLICATIONS IN ELITE SPORT**

**Antonio ROBUSTELLI**

Today in the context of the high competitive demands of elite sport, advances in technologies applied to sports science and performance can allow coaching staff and sport scientists to adjust training load and modulate training/recovery ratio based on quantitative data obtained by analysing the individual response, physiology and biomechanics of each athlete/player. Analysing how biomechanics is affected, from the ground up, by training load and recovery strategies is fundamental for performance output. This lecture/presentation introduces the basics of foot pressure mapping (also known as baropodometry) application in sports performance as well as offering new perspectives on training programming based on science and on-field practice. The role of applied technology and how to integrate foot pressure mapping in both individual and team sports is discussed. The first part of the lecture briefly reviews the basic concept of foot pressure mapping biomechanics, the second part introduces the technological aspects of foot pressure mapping as well as the main differences in data outcomes and application between static and dynamic analysis and between pressure platforms and sensorized pressure insoles. In the last part we discuss data interpretation and how to use them to adopt injury prevention and training individualization strategies; in addition, various methods to practically implement a monitoring lab in a team environment are also discussed.