

TechCamp
@POLIMI

Sport Engineering and Human Performance

Prof. Marco Tarabini



POLITECNICO
MILANO 1863



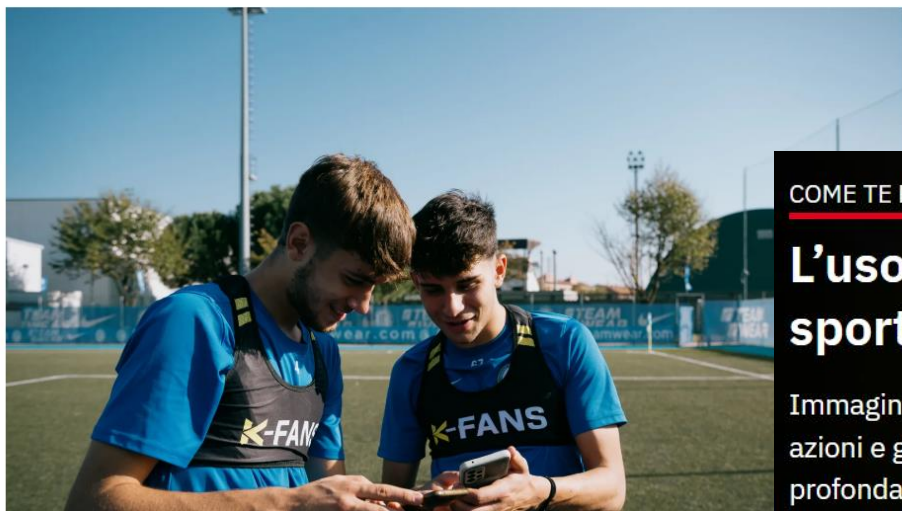
Introduction - Background

Technological innovation is revolutionizing the sports world in the constant search for excellence.

GABRIELE NAVA INTELLIGENZA ARTIFICIALE 12.12.2024

K-Fans, la maglia da calcio con l'AI

Monitora allenamenti e prestazioni. Chi vorrà potrà condividere i dati delle proprie performance in un database mondiale a disposizione di scout e procuratori



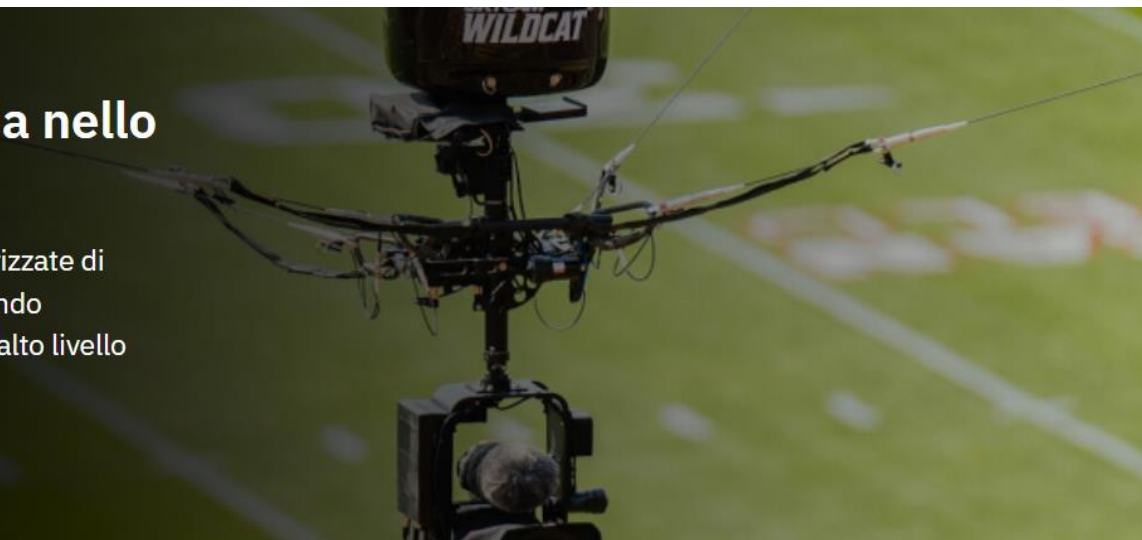
COME TE LO SPIEGO

L'uso della tecnologia nello sport

Immagini, dati, simulazioni computerizzate di azioni e gesti tecnici stanno modificando profondamente le attività sportive di alto livello

LEGGI

18 giugno 2024
di Maria Angonese



Introduction - Background

Politecnico is actively involved in research in the sports sector.

Labs

- Human Performance Lab
- E4Sport

20 Novembre 2024 • Incontri / Numero 27

900 prove in Galleria del vento per il campione del mondo di ciclismo TOP GANNA



di Francesca Pierangeli



Human Performance Lab (Lecco)

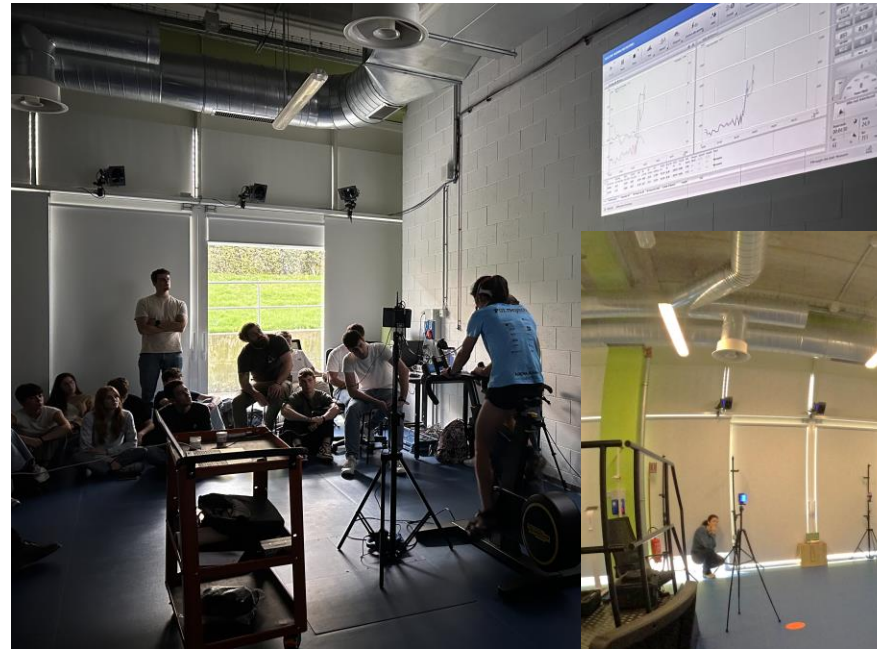
Functional evaluation of healthy subjects, athletes, paralympic athletes.
Collaboration with sports clubs and companies. Research and teaching.

Biomechanics of sport

Athlete-equipment interaction analysis

Effect of perturbations on human
balance and locomotion

Study of athletic and motor-cognitive
performance



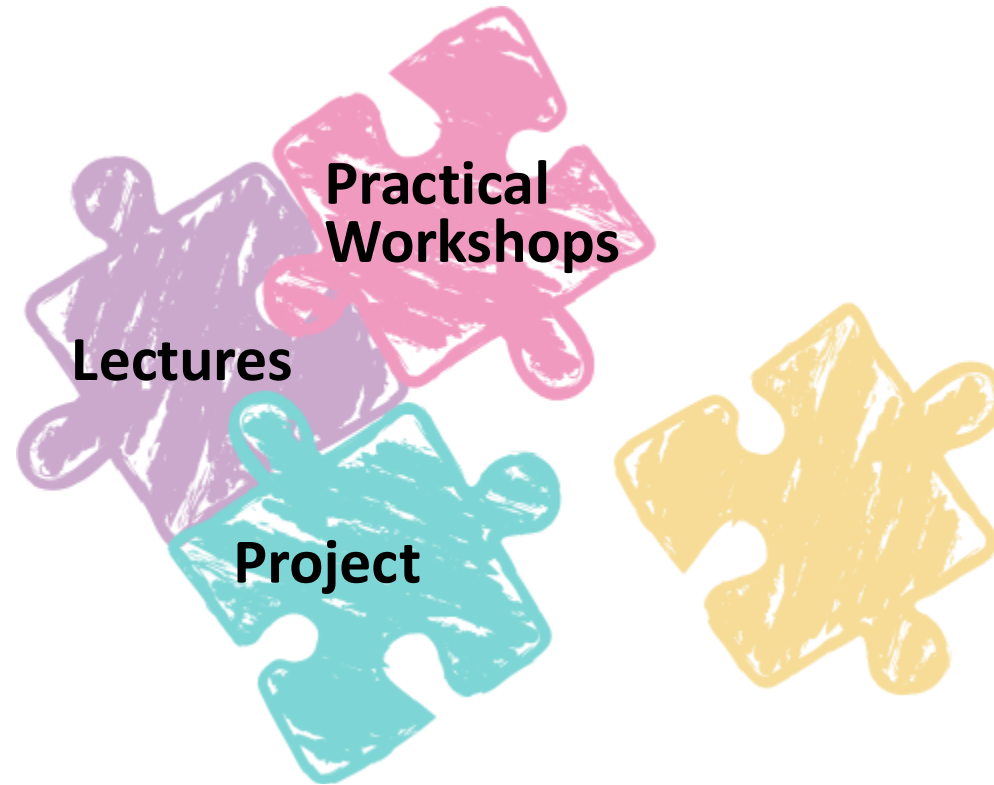
Human Performance Lab (Lecco)

Multisport
Simulator



The course

To transmit complete and up-to-date skills on technological innovation applied to sport with a practical and experiential approach



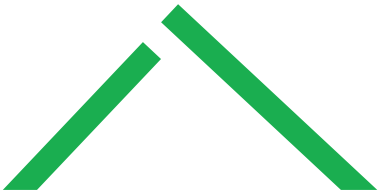
The course - topics

Design and study of sports
equipment

Cognitive evaluation of
athletes and performance



Motion analysis, wearable
sensors, optoelectronic
systems



Practical sessions

Analyzing sports equipment
under the influence of
vibrations



Practical sessions

Characterization of a sports
gesture through movement
analysis



Practical sessions

Cognitive tests to assess athletes' cognitive abilities



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