

## **A new method for evaluation of sport specific performance and injury mechanisms within competitions - 3D markerless motion capture**

Within sports, 3D biomechanics is a widely accepted method to understand movements and forces within the human body in order to assess performance and injury. Actual methods suffer limitations in data quality and practicability

- Rater-based screenings lack quantitative data and miss important information ( i.e. in transversal plane)
- Marker based solutions are mostly bound to lab environments and require much preparation and time for each athlete
- Wearable 3D sensors still suffers the need for sensors and preparation on the athlete and lack some important data, such as 3D joint positions

This workshop presents a new approach of markerless 3D motion capture that can be applied in regular trainings or even competitions. Unlike other markerless approaches, precise data for biomechanical analysis are extracted. This offers new possibilities for research and practice to understand sport performance where it really matters - in real competitive situations

A new method of precise markerless tracking allowing research and practice to understand sport performance where it really matters - in real competitions