



INTERNATIONAL FEDERATION OF  
CP FOOTBALL

*Is possible the linkage of performance determinants  
in team para-sports with classification purposes?  
An example applied in CP-Football.*

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deporte**  
Universidad Miguel Hernández de Elche



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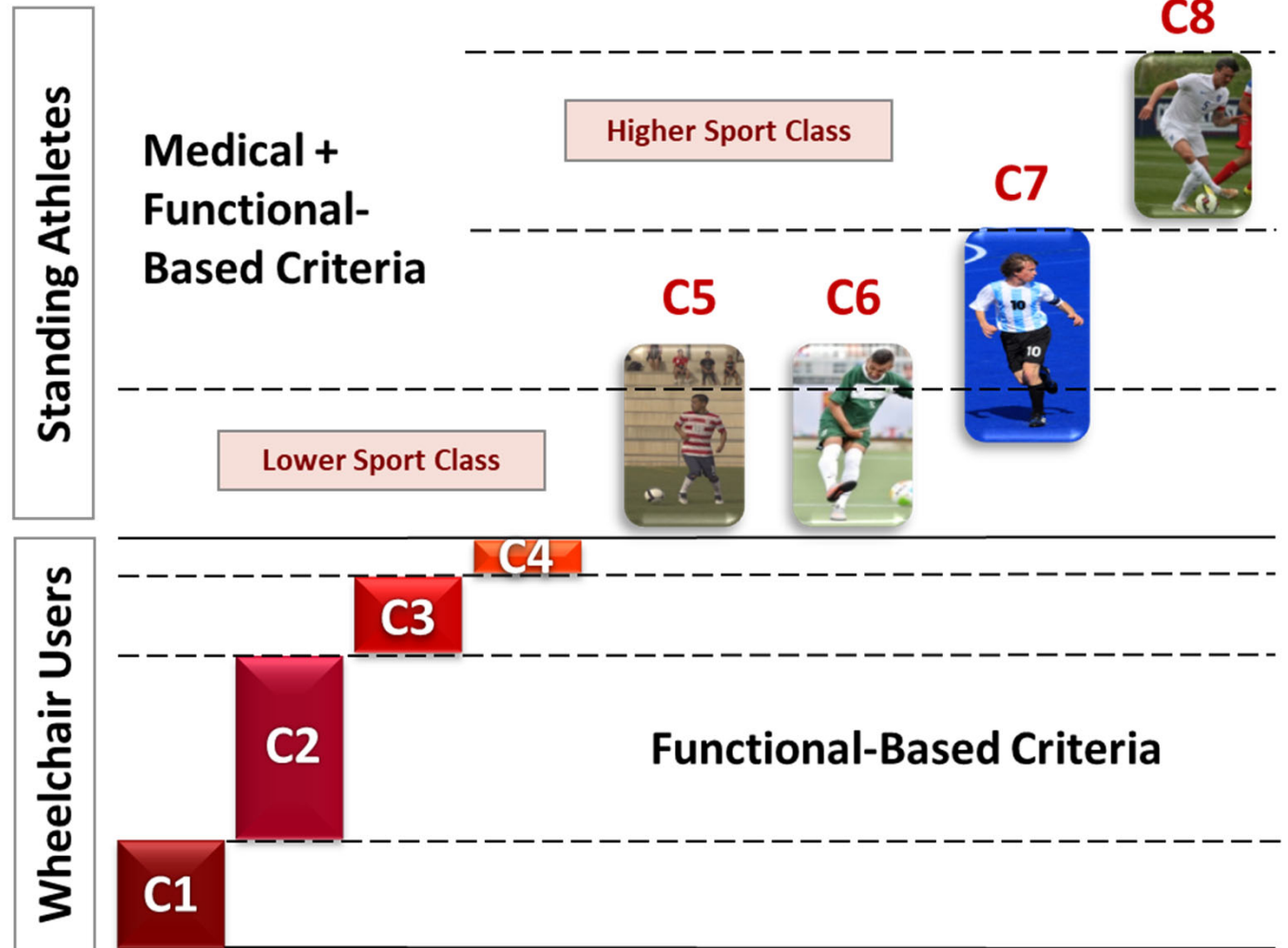
# Background

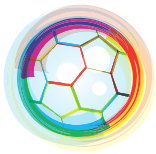


Reina (2014)



*pure football*





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# Performance Parameters in CP-Football



*pure football*





Changes of  
Direction

 Reina et al. (2016)

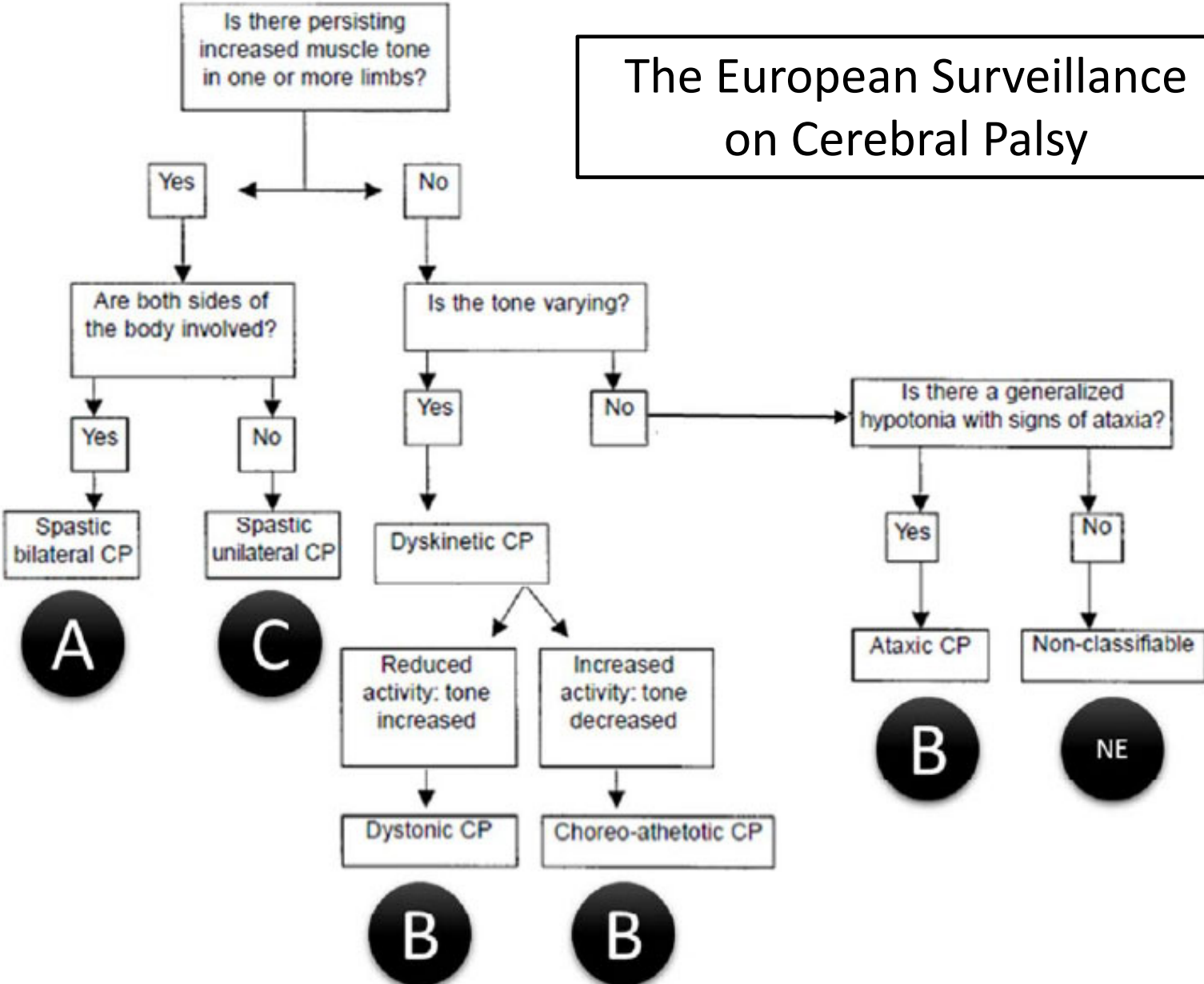
Accelerations /  
Decelerations

Lower Limbs Power  
/ Jumping

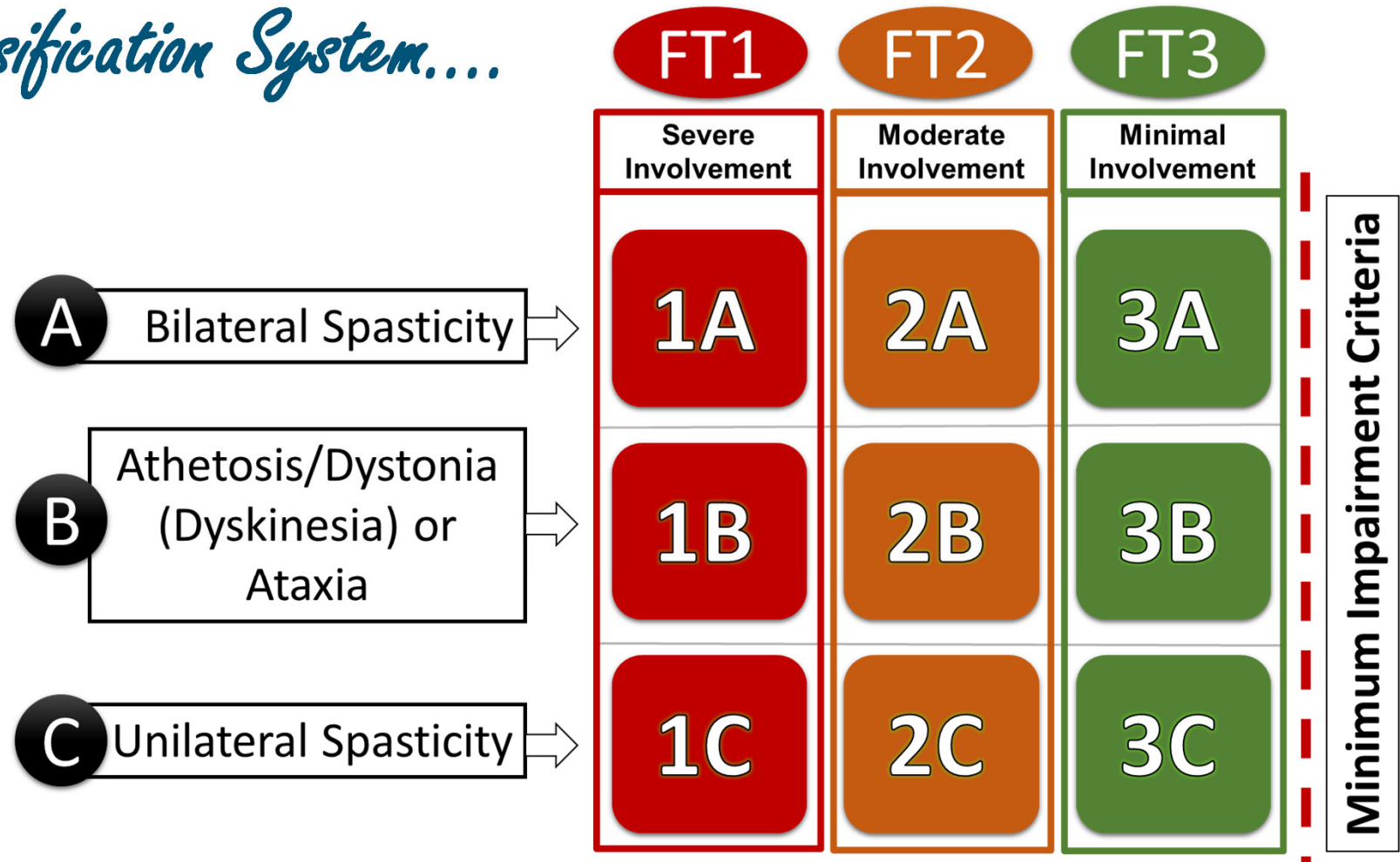
 Reina et al. (2017)

 Reina et al. (2018)

The European Surveillance on Cerebral Palsy

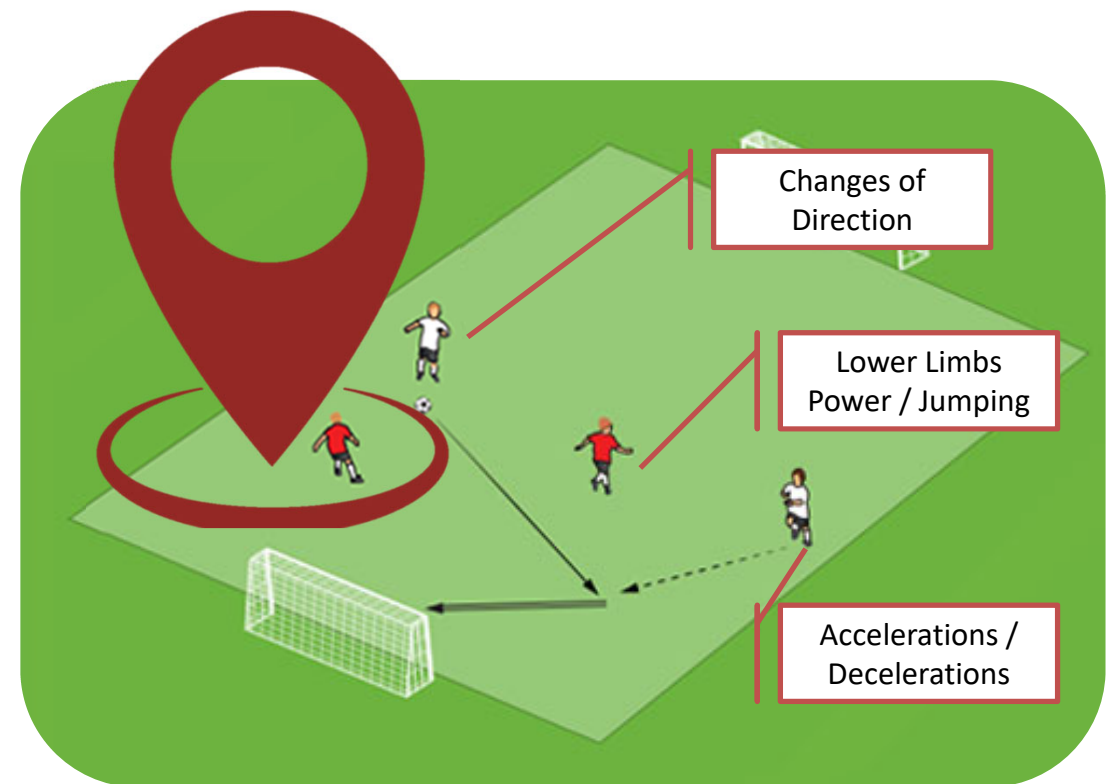


# A New Classification System...

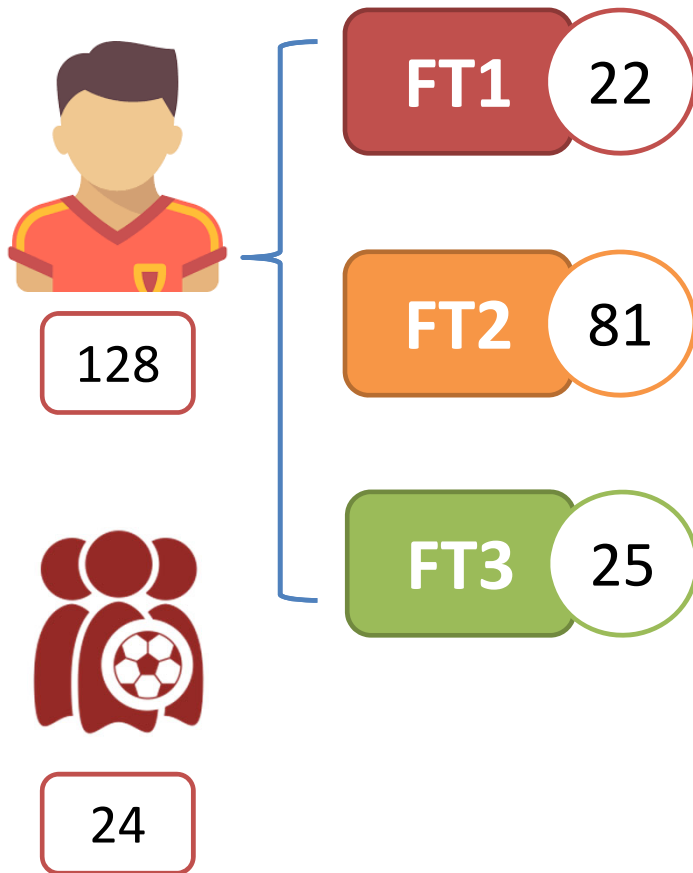


## *Aims of this Study*

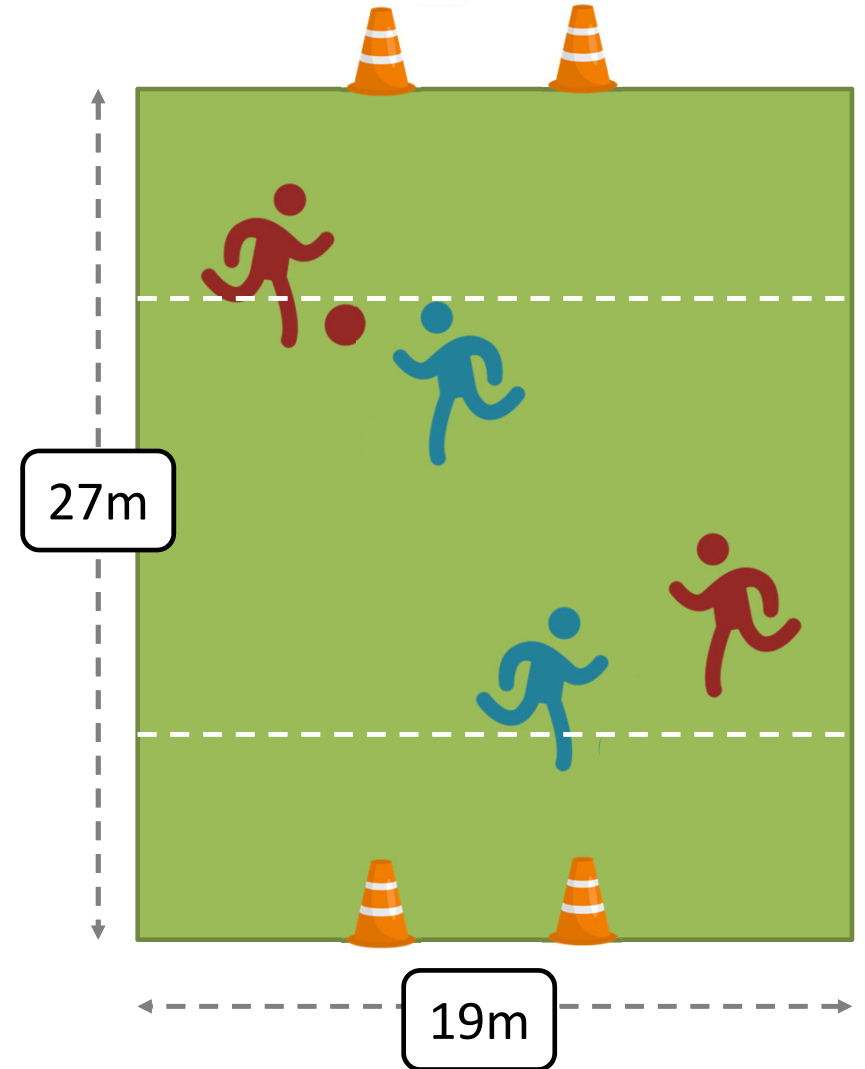
- To describe the relationships between CP Football performance variables and match load descriptors measured by global positioning system (GPS) technology during a small-sided game (SSG) situation.



# Research Methods

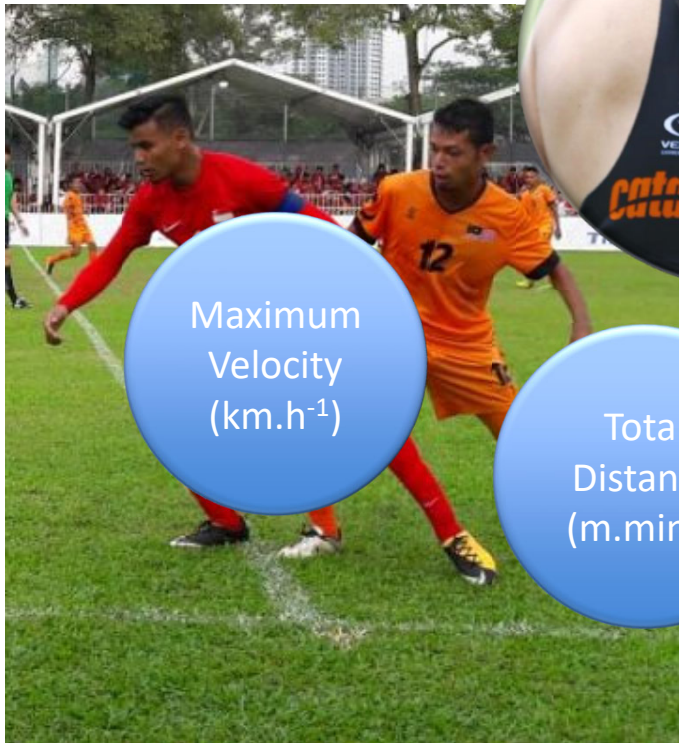


2018 IFCPF Asia-Oceania Championships  
22-30 Nov. 2018 Kish Island, I.R. Iran



# GPS Metrics

Minimax v4.0  
Catapult Innovations™



Maximum  
Velocity  
( $\text{km.h}^{-1}$ )

Total  
Distance  
( $\text{m.min}^{-1}$ )

Acceler. /  
Deceler.  
( $\text{n.min}^{-1}$ )

Mode-  
rate  
(1–2.78)

High  
( $> 2.78$ )

Yanci et al. (2018, 2019)







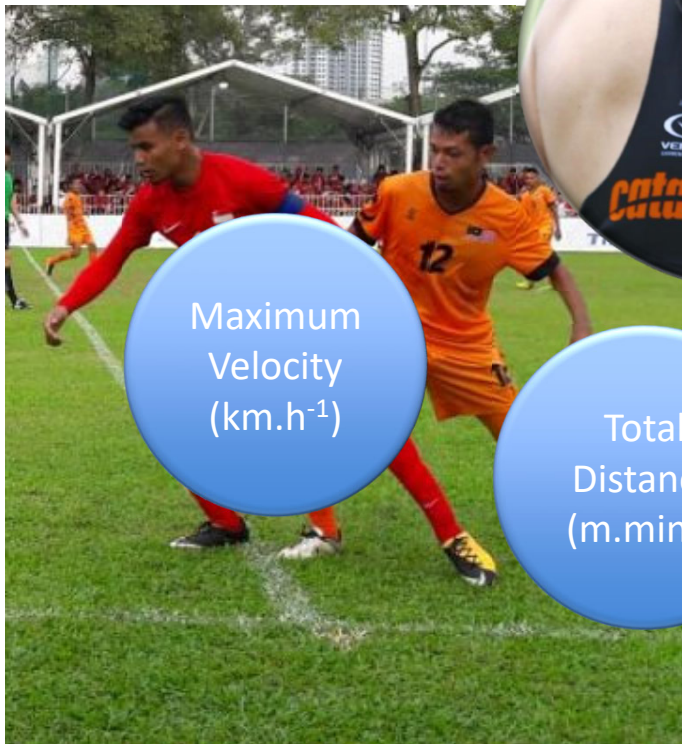
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*parent ball*

# GPS Metrics

Minimax v4.0  
Catapult Innovations™



Distance covered ≠  
Intensities  
(m.min<sup>-1</sup>)

Acceler. /  
Deceler.  
(n.min<sup>-1</sup>)

Sprinting  
(> 18)

High  
Intensity  
Running  
(13 - 18)

Medium  
Intensity  
Running  
(8 - 13)

Jogging  
(3 - 9)

Walking  
(4 - 3)

Low  
Walking  
(< 4)

Yanci et al. (2018, 2019)





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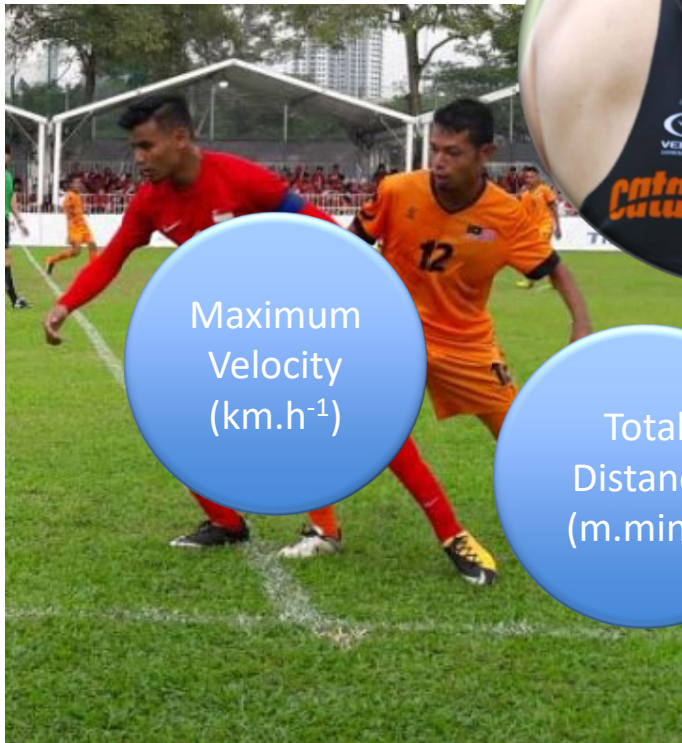


*pure football*

# GPS Metrics

Minimax v4.0

Catapult Innovations™



Maximum  
Velocity  
( $\text{km.h}^{-1}$ )

Total  
Distance  
( $\text{m.min}^{-1}$ )

Acceler. /  
Deceler.  
( $\text{n.min}^{-1}$ )

Player  
Load

Distance  
covered  $\neq$   
Intensities  
( $\text{m.min}^{-1}$ )

Change of  
Direction  
(number.  
 $\text{min}^{-1}$ )

Left vs  
Right

Forward  
vs Back

High  
Intensity

Medium  
Intensity

Low  
Intensity

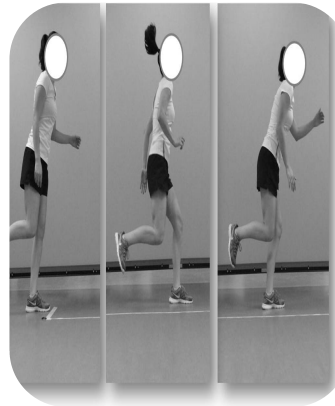
Yanci et al. (2018, 2019)



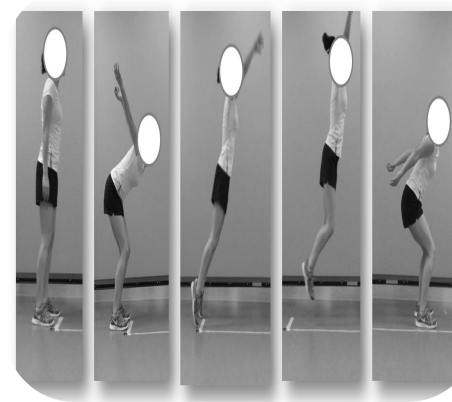
# Research Methods



**Four Bounds for Distance**



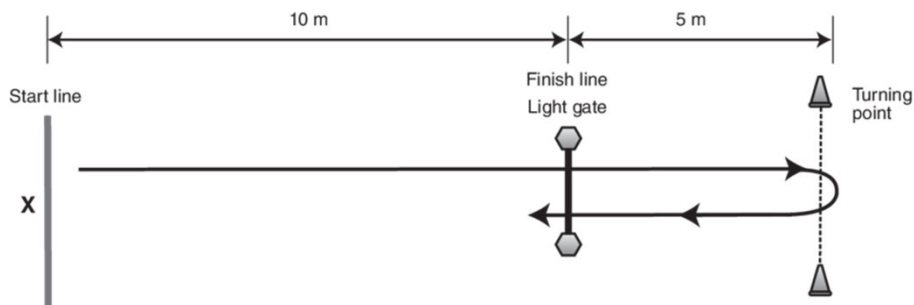
**Triple Hop for Distance**  
(dominant and non-dominant legs)



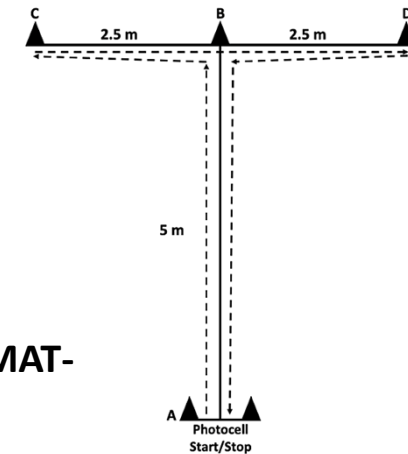
**Standing Broad Jump**



Reina et al. (2018)



**5-0-5 test**



**Modified Agility Test -MAT-**



Reina et al. (2016)



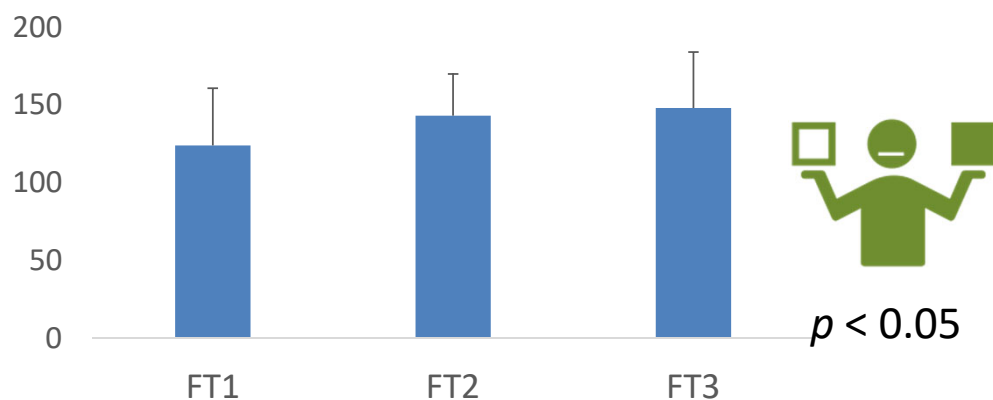
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# Results (1/3)

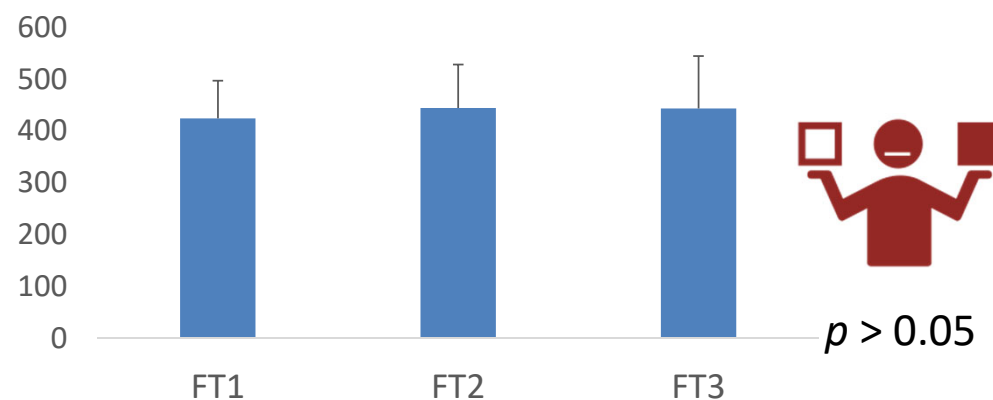
\* All the scores in centimeters (cm)

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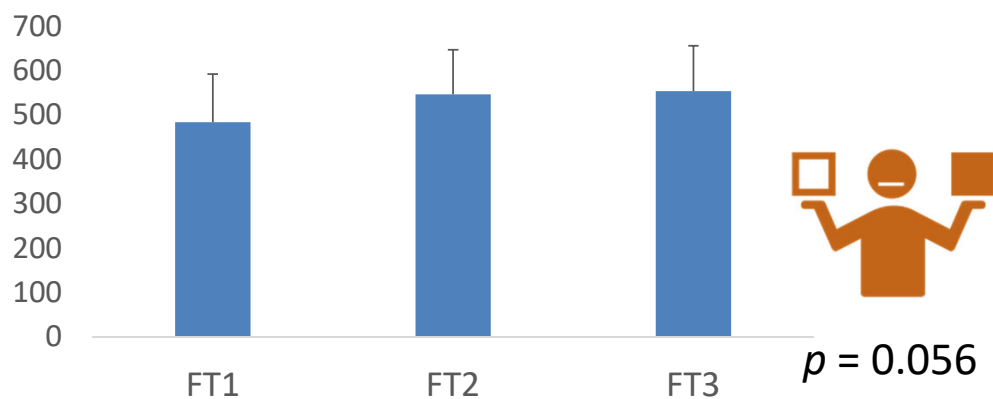
### Standing Broad Jump



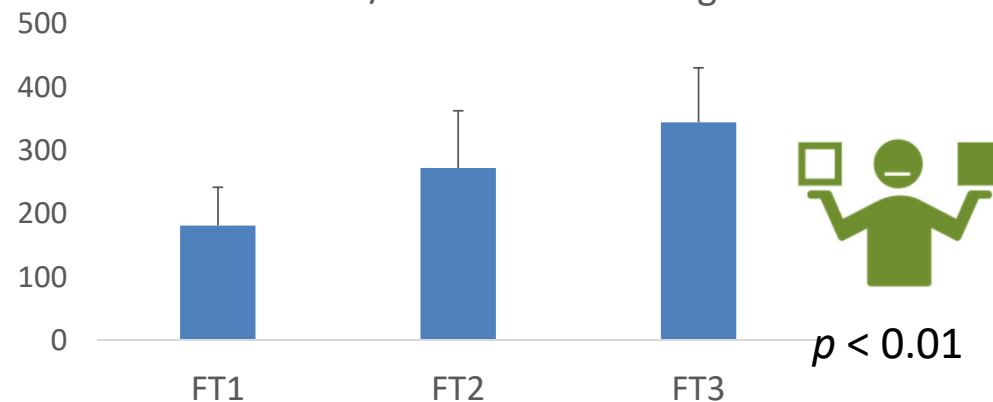
### Triple Hop Less/Non Affected Leg



### Four Bounds for Distance



### TH More Affec. / Non-Dominant Leg



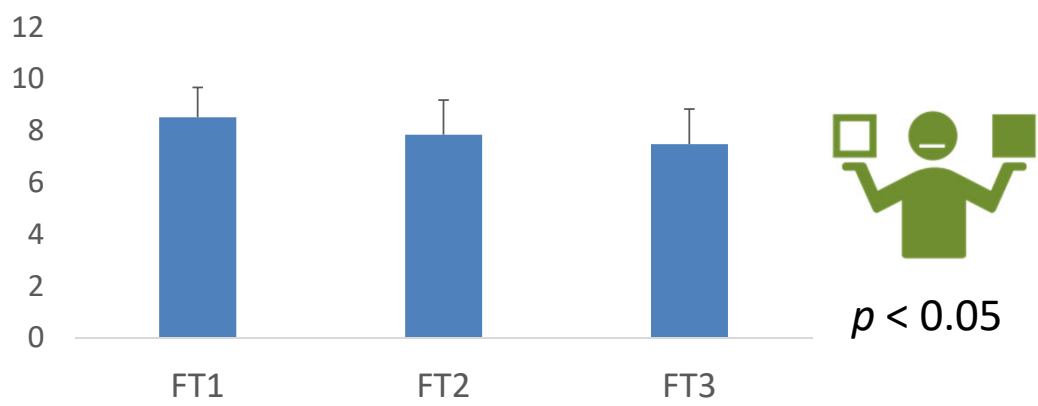


# Results (2/3)

\* All the scores in seconds (cm)

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### MAT

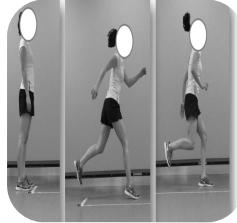





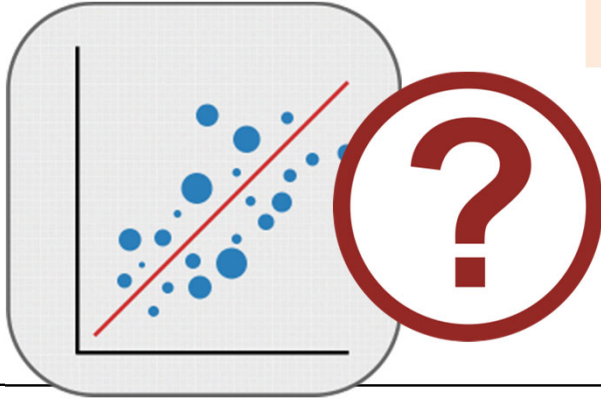
### 5-0-5



# Results (3/3)

High	Moderate	Low
------	----------	-----

			Mod-Acc	High-Acc	Mod-Dec	High-Dec	PL
<b>Mod-Acc</b>	cor.		--	,520	,825	,557	,232
	p			,000	,000	,008	
<b>High-Acc</b>	cor.			--	,505	,496	,244
	p				,000	,000	,006
<b>Mod-Dec</b>	cor.				--	,654	,154
	p					,000	,082
<b>High-Dec</b>	cor.					--	,191
	p						,031
<b>PL</b>	cor.						--
	p						



## *Conclusions*

- Confirmation of the relevance of performance variables in CP-Football related to **lower limbs power** in the **new classification system**.
- The non-significant or **trivial and small associations** of performance variables with the **SSG external load** (included as part of the technical assessment during classification):
  - Does this situation not reproduce the real demands of the game?
  - How much the SSG variable constrains the relationships between impairment and/or performance?
- The SSG situation could be used by classifiers to **observe technical aspects** or how the players perform sport-specific skills.



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*Project Supported by:*

*Project Conducted by:*



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**CP FOOTBALL**

International  
**Paralympic**  
Committee



**UNIVERSITAS**  
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