



INTERNATIONAL WINTER SCHOOL on “Competition and Performance Analysis in Swimming”

Information:

- **Framework:** Funded by Erasmus+ as a Blended Intensive Program (BIP)
- **Dates:** 2h/day (13h30-15h30) online courses on 23rd, 25th, 26th November, presential courses from 7th to 11th December 2026
- **Location:** Faculty of Sport Sciences, University of Rouen Normandy, FRANCE (1h30 from Paris by train)
- **Eligible applicants:** 15 positions available for Master, PhD and postdoc students from universities with an Erasmus Charter for Higher Education (ECHE)
- **Costs:** no tuition fees as students will receive an Erasmus+ grant
- **Credits:** 4 ECTS (certificate of attendance delivered to each student)
- **Duration :** 40 h (6h online, 34h presential)

Aim: to acquire fundamental and technical skills on...

- **Competition analysis** (race segmentation using dedicated app, cycle-to-cycle analysis of clean swimming, race management profiling)
- **Performance analysis** integrating biomechanics, motor control and physiology
- Notational video analysis; Signal processing from IMU; Programming, Visualization and Data mining (basic skills in R and/or Python recommended),
- Energetics & physiological analysis (VO₂, lactate and heart rate signal)
- Working language: **English**

Format & Program: 6-7h/day

- **2 lectures/day** by guest international speakers (provisional speakers: R Fernandes, M Cortesi, T Gonjo, B Olstad, I Ljodal, B Guignard, D Simbana, L Seifert, PM Leprêtre, C Loisel, Y Raineteau)
- **Practical courses** including 2 data collections
- **Group work** (4-5 students) mixing French Master students from University of Rouen Normandy and students from Erasmus+ partner or associated countries