عنوان فارسی مقاله:

واحده اندازه گیری ایتربسی و آنالیز بیومکانیکی شنا کردن: به روز رسانی

عنوان انگلیسی مقاله:

Inertial measurement unit and biomechanical analysis of swimming: an update

توجه!

این فایل تنها قسمتی از ترجمه میباشد. برای تهیه مقاله ترجمه شده کامل با فرمت ورد (قابل ویرایش) همراه با نسخه انگلیسی مقاله، اینجا کلیک کنید.
Conclusion

The technical developments for assessment of swimming biomechanics are either too rudimentary or too complicated to deal with for a pervasive measurement of the athlete kinematics. The setup time, capturing volume, data processing time, resolution of measurement and number of swimmers that can be monitored at a time are the most critical problems that we face using the standard measurement systems in the pools. Wearable IMUs offer a user-centric and accurate solution to estimate temporal, coordinative and performance related parameters in swimming. Ensemble estimation of energy expenditure, coordination and velocity of the swimmer using wearable IMUs offers a convenient package to monitor the variability and also degradation of technique due to fatigue.

The bottom line is that wearable measurement systems are targeted to aid the coaches in designing an optimal personal training plan for athletes to improve their performance. More efficacious way to assist the coach intuition is designing an interface to superpose the parameters extracted from wearable IMU(s) (details of technique at stroke resolution) on the video recordings of the training sessions for a fast and comprehensible visualization.