

Homework 3

OCE2901

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Performance Analysis of Surfing: A Review Review

Published in the Journal of Strength and Conditioning Research, *Performance Analysis of Surfing: A Review*, summarizes the known research done on the forces experienced by a surfer as of January 2017 and discusses the validity of multiple measurement methods for surf dynamics. The paper compiles information from many different papers on the measurements of external loads, time-motion analysis (TMA), global position system (GPS) analysis techniques, and the measurements of internal loads like heart rate. The most important techniques highlighted by the paper are TMA and GPS analysis as, when synchronized, allow accurate estimation of the surfer's motion, the wave characteristics and the activity performed by the surfer. The paper also discusses the various errors in those techniques and how they can be mitigated or characterized in different wave and coastal environments.

For the purposes of this class, the paper details which variables have been recorded and studied by a variety of papers and which need more research. It specifically mentions forces whilst wave riding and power output while paddling as interesting areas of study that have not been published. Additionally, it also compiles and defines a list of categories that encompass the various stages of surfing: paddling, stationary, wave riding, paddling for wave, and miscellaneous. The definitions of these categories could be used to aid in the analysis as it would break data into defined blocks.

Source: Farley, Oliver R.L.; Abbiss, Chris R.; Sheppard, Jeremy M. Performance Analysis of Surfing: A Review, Journal of Strength and Conditioning Research: January 2017 - Volume 31 - Issue 1 - p 260-271
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