


D Problem: Datasets

D Solution: Dspace



Research data information

Verb pair similarity scores (Gold Standard 130 verb pairs)

This data set is offered as a standard for testing verb similarity using WordNet and consists of 130 verb pairs.

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File extension '.txt'

- [200601-GWC-130verbpairs.txt](#) (3 kB) -- Dataset

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Effectiveness of novel fabrics to resist punctures and lacerations from white shark (*Carcharodon carcharias*): implications to reduce injuries from shark bites

No Thumbnail

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- Original dataset (1.343Mb)
- Puncture tests.csv preservation copy (245.6Kb)
- Laceration tests.csv preservation copy (953.7Kb)
- Field tests.csv preservation copy (45.98Kb)

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Abstract
Increases in the number of shark bites, along with increased media attention on shark-human interactions has led to growing interest in preventing injuries from shark bites through the use of personal mitigation measures. The leading cause of fatality from shark bite victims is blood loss; thus reducing haemorrhaging may provide additional time for a shark bite victim to be attended to by emergency services. Despite previous shark-proof suits being bulky and cumbersome, new technological advances in fabric has allowed the development of lightweight alternatives that can be incorporated onto traditional wetsuits. The ability for these fabrics to withstand shark bites has not been scientifically tested. In this report, we compared two types of recently developed protective fabrics that incorporated ultra-high molecular weight polyethylene (UHMWPE) fibre onto neoprene (SharkStop and ArmourTX) and compared them to standard neoprene alternatives. We tested nine different fabric variants using three different tests, laboratory-based puncture and laceration tests, along with field-based trials involving white sharks *Carcharodon carcharias*. Field-based trials consisted of measuring *C. carcharias* bite force and quantifying damages to the new fabrics following a bite from 3–4 m total length *C. carcharias*. We found that SharkStop and ArmourTX fabric variants were more resistant to puncture, laceration, and bites from *C. carcharias*. More force was required to puncture the new fabrics compared to control fabrics (laboratory-based tests), and cuts made to the new fabrics were smaller and shallower than those on standard neoprene for both types of test, i.e. laboratory and field tests. Our results showed that UHMWPE fibre increased the resistance of neoprene to shark bites. Although the use of UHMWPE fibre (e.g. SharkStop and ArmourTX) may therefore reduce blood loss resulting from a shark bite, research is needed to assess if the reduction in damages to the fabrics extends to human tissues and decreases injuries.

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