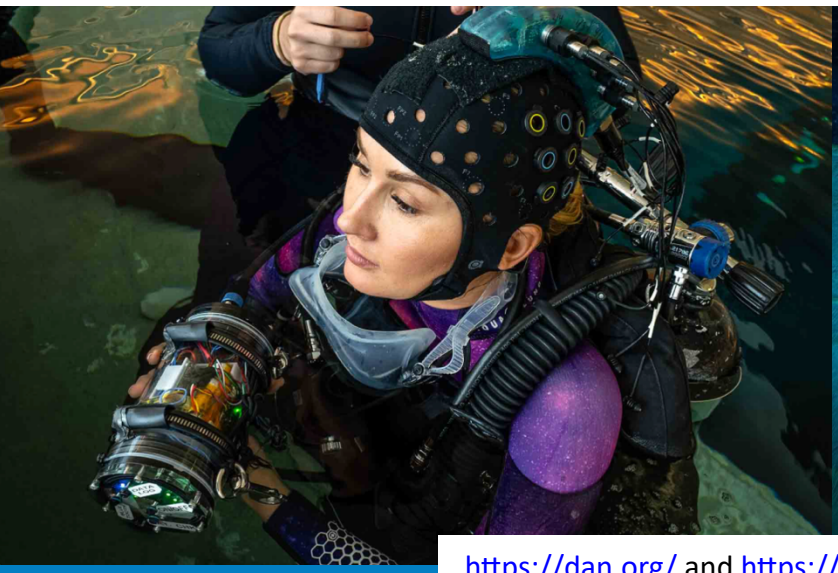
Measuring brain activity Underwater: DAN x DDD

GUE PROJECT BRIEF - 2024

Maintaining unaltered mental function is crucial for dive safety. Supported by the Office of Naval Research, (@usnavyresearch), DAN is investigating the effectiveness of a head-mounted fNIRS device in assessing the neurological effects of diving.



https://dan.org/ and https://deepdivedubai.com/

A research team from DAN (*Divers Alert Network*) spent a week at Deep Dive Dubai in June to conduct a series of experiments measuring brain activity during diving at different depths and breathing different gases. Our staff acted as test subjects and went through the three hour protocol.

Maintaining mental function is vital for safety and efficiency in advanced diving operations, but various underwater conditions can affect it. Currently, brain activity can't be directly measured underwater. This study aims to test a head-mounted fNIRS wearable device for measuring brain activity underwater while performing cognitive tests on a waterproof smartphone. The results will aid the development of underwater brain scanning techniques and identify limitations for research, commercial, and military applications.

Supported by the Office of Naval Research, (@usnavyresearch).

STATUS: results pending!

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LOCATION –
Deep Dive Dubai, UAE

PARTNERS:
DAN and its collaborators, including many members / divers from @guehq recently tested the Triton Systems device at @deepdivedubai , the worlds deepest diving pool