



## L1 Adaptative control for small underwater vehicles

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# L1 Adaptive control for small underwater vehicles.

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*Small underwater vehicles are subject to many disturbances and modelling uncertainties. To overcome these problems, we have introduced a L1 nonlinear adaptive controller for the first time onboard an tethered underwater vehicle. This adaptive controller allows fast convergence of the estimated parameters of the dynamic model even without any a priori knowledge of their values. It is robust to parameters' change, such as salinity or payload changes. It appears that this controller also rejects disturbances (mechanical shock, waves...) )*

*We will detail the theoretical aspects of the said controller and will present the experimental results, obtained with an AC-ROV prototype.*