# Article information:

Retrieving shallow stream bathymetry from UAV-assisted RGB imagery using a geospatial regression method - ScienceDirect  
<https://www.sciencedirect.com/science/article/abs/pii/S0169555X19302314>

# Article summary:

1. This study evaluated the capability of a geographically weighted regression (GWR) model to retrieve bathymetry of a shallow stream from simple RGB imagery.

2. Band ratios of ln(DNG/DNR) were selected as an optimal spectral input for bathymetric inversion models through the principal component analysis (PCA).

3. The GWR model successfully alleviated the biases of conventional models, accurately modelling the effect of spatial heterogeneity on the remote-sensing radiance-water depth relationship.

# Article rating:

May be slightly imbalanced: The article presents the information in a generally reliable way, but there are minor points of consideration that could be explored further or claims that are not fully backed by appropriate evidence. Some perspectives may also be omitted, and you are encouraged to use the research topics section to explore the topic further.

# Article analysis:

This article is generally reliable and trustworthy, providing detailed information about the research conducted and its results. The authors provide evidence for their claims and discuss potential limitations of their approach. They also acknowledge that further research is needed to improve accuracy and reliability of their method.

The article does not appear to be biased or one-sided, as it presents both sides equally and acknowledges potential limitations of their approach. It does not contain any promotional content or partiality towards any particular point of view. Possible risks are noted throughout the article, such as potential errors due to inaccurate data acquisition or assumptions made in the model development process.

The only potential issue with this article is that it does not explore counterarguments or alternative approaches to retrieving bathymetry from UAV-assisted RGB imagery, which could have provided additional insights into the effectiveness of this method compared to other methods.

# Topics for further research:

* UAV-assisted bathymetry
* Alternative bathymetry methods
* UAV-assisted RGB imagery
* Accuracy of bathymetry retrieval
* Bathymetry data acquisition
* Model development for bathymetry retrieval

# Report location:

<https://www.fullpicture.app/item/aa325300a1e14f036a57094cacccb1a6>