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Investigating the potentials of an automatic seafloor classification from multibeam backscatter data in Fledermaus Geocoder Toolbox (FMGT)

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The potentials and limitations of an automated seafloor classification in FMGT were examined with regard to the quality of processed backscatter data acquired from different survey locations and different multibeam systems. Analysis of the results suggests that the models implemented in FMGT enhanced the correlation between backscatter return strengths from different seafloor types and its associated grain sizes, irrespective of the multibeam type or the location the data was acquired. Results were further improved and verified with available groundtruth information, while numerical extraction and analysis was achieved with a Matlab program.

Biography

Chidi Nwoke is a recent graduate of Geomatics with a specialization in Hydrography CAT A from the Hafen City University, Hamburg, Germany, where in conjunction with Fugro Survey B.V, he worked extensively on automated seafloor classification from Multibeam backscatter data. He has previous Geomatics engineering degree from the University of Stuttgart, Germany and University of Lagos, Nigeria. He has worked as a surveyor, data processor, design engineer and as a teaching assistant in the past 8 years and recently just concluded a project with Hafen City University on shallow water seismic probes and profile analysis. He has published papers related to his research work on subsurface uplift changes from gravity observations and seafloor classification from backscatter data with the European Association of Geosciences and Engineers, and with the German Hydrographic Society respectively. He currently resides in Hamburg Germany and does part time project work related to hydrography.

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