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Helical swimming in granular media ROBERTO ZENIT, ELSA DE LA CALLEJA, FRANCISCO GODINEZ, Universidad Naclonal Autonoma de Mexico — In nature, many organisms are capable of swimming in sand by performing an undulatory motion. Recently, Goldman and collaborators showed that a modification of the low-Re number resistive force theory can be used to explain the phenomena. In this investigation we use a self-propelled magnetically-driven swimmer with a helical tail to further investigate the swimming performance in sand. We successfully produced devices that effectively swam in sand the the rotating action of a helical tail. We measured the swimming speed for a range of rotational speeds and tail geometries. Preliminary results will shown and discussed.

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