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Low Re swimming in suspensions J. AMADEUS PUENTE-VELAZQUEZ, FRANCISCO GODINEZ, ROBERTO ZENIT, Universidad Nacional Autonoma de Mexico — The swimming performance of force-free magnetic swimmers is studied experimentally for the creeping flow regime. Instead of purely viscous fluids, we consider suspensions of neutrally buoyant particles. Swimmers with both rigid and flexible helical tails are used. We found that in all cases, the swimming speed is enhanced by the presence of particles. As the particle concentration increases, the swimming speed is larger, for a given frequency. The effect is more significant for the case of swimmers with flexible tail. The results are discussed and contrasted with some recent modeling effort.

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