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Optimal shapes for self-propelled swimmers PETROS KOUMOUT-SAKOS, WIM VAN REES, MATTIA GAZZOLA, ETH Zürich — We optimize swimming shapes of three-dimensional self-propelled swimmers by combining the CMA- Evolution Strategy with a remeshed vortex method. We analyze the robustness of optimal shapes and discuss the near wake vortex dynamics for optimal speed and efficiency at Re=550. We also report preliminary results of optimal shapes and arrangements for multiple coordinated swimmers.

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