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**Surfing wavy surfaces: Bacteria-surface interactions in flow** GASTÓN L. MIÑO, VASILY KANTSLER, ROMAN STOCKER, MIT — Complex processes occur when microbes interact with surfaces, from mixture enhancement and motion rectification to biofilm formation. Microbe-surface interactions frequently occur in flowing fluids, and flow has recently been shown to have itself unexpected consequences on the dynamics of motile microbes. Here we report on microfluidic experiments in which the interactions of *Escherichia coli* bacteria with wavy surfaces was quantified in the presence of fluid flow, a model system for naturally occurring topography of many real surfaces. We quantify surface interactions in terms of incident and scattering angles over a range of flow conditions, and compare results to the observations for a microchannel with straight walls.

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