

Abstract Submitted  
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**Curved microchannels and bacterial streamers**<sup>1</sup> ROBERTO RUSCONI, SIGOLENE LECUYER, Harvard University, LAURA GUGLIELMINI, HOWARD STONE, Princeton University — Bacterial biofilms are commonly identified as microbial communities attached to a surface and encased in a self-secreted extracellular matrix. Due to their increased resistance to antimicrobial agents, biofilms have an enormous impact on health and medicine (e.g., wound healing, implant-associated infections, disease transmission). On the other hand, they constitute a major component of the stream ecosystem by increasing transport of nutrients and retention of suspended particles. In this talk, we present an experimental study of bacterial biofilm development in a microfluidic device. In particular, we show the formation of filamentous structures, or streamers, in curved channels and how these suspended biofilms are linked to the underlying hydrodynamics.

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