

Counting and control in bacterial motility

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BACTERIA such as *Escherichia coli* and *Salmonella enterica* are able to swim in liquids and swarm over surfaces using flagella. Briefly, flagella are long helical filaments attached to rotary motors embedded within the membrane. When the motors spin counter clockwise, the filaments form a helical bundle that propels the bacterium forward in a corkscrew-like manner. Both *E. coli* and *Salmonella* average four flagella per cell. If the bacterium builds too few or too many flagella, then its movement is impaired. In this talk, I will discuss how bacteria count and control the number of flagella that they assemble.