Title:	Realization of morphing logic gates in a repressilator with quorum sensing feedback
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Abstract:	We demonstrate how a genetic ring oscillator network with quorum sensing feedback can operate as a robust logic gate. Specifically we show how a range of logic functions, namely AND/NAND, OR/NOR and XOR/XNOR, can be realized by the system, thus yielding a versatile unit that can morph between different logic operations. We further demonstrate the capacity of this system to yield complementary logic operations in parallel. Our results then indicate the computing potential of this biological system, and may lead to bio-inspired computing devices.
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