State dependent delays in the biological sciences: Where do they come from?

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Biological systems often have dynamics in which delays play a significant role. These delays may be state-dependent (either increasing or decreasing functions of the state variable) or distributed, or both. This talk will survey some of the many examples in the biological sciences in which this occurs, how those delays arise as well as their nature. I will not discuss, necessarily, the consequences of various types of delays for the dynamics of the underlying system.