

## Pattern perception in animals remote from man

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Humans, with the massive computational power of the cerebral cortex, have managed to solve most of the problems that make pattern recognition such a difficult task. Other animals are not so well endowed with processing power: an insect brain, for example, has  $10^5$  to  $10^6$  neurons compared with our  $10^{11}$ . Nevertheless, they still have to recognise predators, prey and conspecifics, and find their way around the world. Often this means that they have to cut corners, using what machinery they have in economical ways. Typically this means tailoring their recognition systems to just those features that really matter, rather than going for the general purpose mechanism that primates have achieved. In this talk I will examine some of the ingenious and sometimes strange solutions that animals such as insects, spiders, crabs and molluscs have come up with to simplify the tasks of pattern recognition, while still satisfying their requirements of their often complex behaviour.